North Carolina

Solid Waste Management

Annual Report

July 1, 2004 – June 30, 2005

State of North Carolina
Michael F. Easley, Governnor

Department of Environment and Natural Resources
William G. Ross Jr., Secretary

Reduce – Reuse – Recycle

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Fiscal Year 2004-2005

Acknowledgements

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CHAPTER 1
PAST, PRESENT AND FUTURE

This consolidated annual report is required by the North Carolina General Assembly in G.S. 130A-309.06, as amended in 2001. The information presented is from 522 (100 county and 422 municipal) local government annual reports, 332 (including 15 out-of-state) permitted solid waste management facilities and 195 state agencies, institutions and schools. These reports represent activities related to the management of solid waste for the period July 1, 2004 through June 30, 2005.

This report combines several annual reports that were once issued separately by the Department of Environment and Natural Resources. The reports were the Comprehensive Solid Waste Management Report, the Scrap Tire Disposal Account Report, the White Goods Management Report and the Solid Waste Management Trust Fund Report. This report also includes information from the Department of Transportation regarding its use of recycled materials in contracts and data from the Department of Administration on bid procedures, the purchase of materials with recycled content and a summary of items purchased with recycled content.

Key Findings

- The state per capita disposal rate is 1.29 tons per person per year, a 2 percent increase beyond last fiscal year or an increase of 21 percent from the FY 91-92 base year.
- North Carolina communities disposed of 11,029,485 tons of waste in North Carolina and out-of-state facilities. This represents an increase of 316,041 tons from the previous fiscal year.
- North Carolina-permitted solid waste management landfills received a total of 10,044,705 tons of solid waste during FY 2004-2005. Almost 119,202 tons originated from other states, an increase of 10,399 import tons over the previous period. South Carolina and Virginia accounted for all imported waste.
- Major materials recovered by North Carolina local governments during FY 04-05 were fiber (55 percent), metals (23 percent) and glass (11 percent).
- For the fifth straight year, the number of local government curbside programs declined, although the number of households served grew.
- Measurable and steady progress toward waste reduction initiatives do not appear evident in the most recent version of local government ten-year solid waste management plans. A majority of the county solid waste programs are reactive rather than progressive.
- NC continues to rely heavily on exporting waste. Over 1,161,926 tons of waste were exported in FY 2004-2005 compared to 119,202 imported tons.
- Despite reliance on exporting waste, North Carolina may become one of the nation's largest importers of waste if landfills currently being considered become operational as proposed.
- The forecast for waste disposal requirements ten years into the future indicates a need for disposal capacity to handle approximately 14 million tons of waste.

Recommendations

North Carolina has not halted the trend of increased waste generation and disposal. The state has moved forward with improvements to the state's solid waste management methods. Gains include better record keeping, the ability to calculate landfill capacity, enhanced public participation and additional strategic planning. *However, the goal of decreasing per capita waste disposal is not progressing.* To begin to decrease future waste disposal, the following should be considered.

- Increase source reduction, municipal solid waste recycling and source-separated composting of organics to reduce the need for additional municipal solid waste disposal capacity as the population grows and predicted per capita disposal amounts increase. This may require additional materials bans from landfills.
- Enhance infrastructure and markets to increase source reduction and both MSW and special waste recycling to reduce the need for additional disposal capacity.

- North Carolina should work to establish a convenient recycling collection infrastructure available to the public statewide for discarded electronic materials. In conjunction, North Carolina should take steps to build a private electronics recycling infrastructure that properly manages electronic material to minimize environmental harm and maximize economic value.
- Consider reissuing and enforcing Executive Order 156 State Government Environmental Sustainability, Reduction of Solid Waste, and Procurement of Solid Waste, and Environmentally Preferable Products [http://www.p2pays.org/ref/03/02221.pdf], which first passed in July 1999.
- Initiate a statewide tip fee. This fee (or tax) would serve as an incentive for increased recycling and would generate revenue from waste being disposed of or managed through North Carolina facilities for purposes such as clean-up of old landfills.
- Consider a permit fee for solid waste management facilities to support permit and compliance needs of the solid waste program.

Solid Waste Disposal

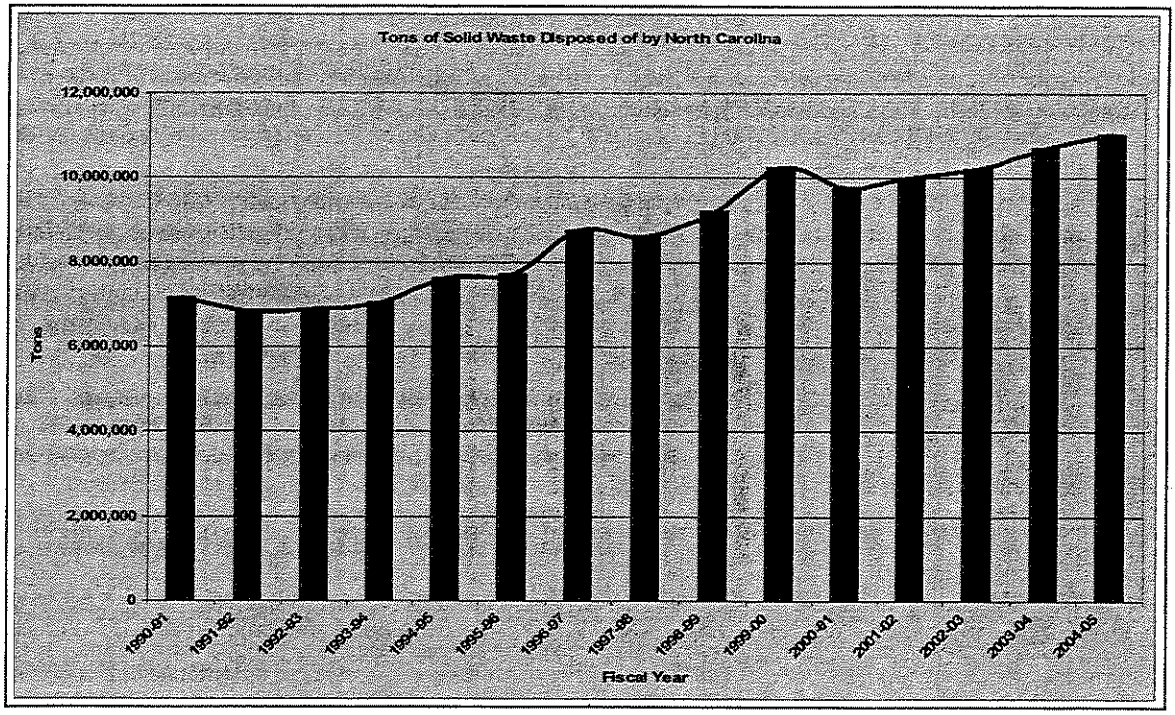
This past year, the amount of waste disposed in North Carolina increased, as it has for the past decade. Both the total amount of waste disposed and the amount disposed on a per capita basis increased. This increase has been continual despite an economic recession and significant changes in the industrial and agricultural sectors of the North Carolina economy.

The state measures changes in waste disposal rates by comparing the current year's per capita waste disposal rate to Fiscal Year 91-92 year's base per capita rate. (**Formula: Total Tons Disposed ÷ Population = Per Capita Disposal Rate**). Negative numbers indicate a decrease in the per capita disposal rate; positive numbers an increase. Waste reduction is a change from the base year, not a change from year to year. As seen in the following table, North Carolina continues to increase the absolute amount of waste disposed.

Fiscal Years	Tons Disposed	Population	Per Capita Disposal Rate	Percent Waste Reduction from Base Year 1991-1992
2004-2005	**11,029,485**	**8,541,263**	**1.29**	**21 %**
2003-2004	10,713,444	8,418,090	1.27	19 %
2002-2003	10,236,960	8,323,375	1.23	15 %
2001-2002	9,999,284	8,188,008	1.22	14 %
2000-2001	9,752,510	8,049,313	1.21	13 %
1999-2000	10,267,137	7,938,062	1.29	21 %
1998-1999	9,214,323	7,797,501	1.18	10 %
1997-1998	8,607,578	7,645,512	1.13	5 %
1996-1997	8,741,727	7,490,812	1.17	9 %
1995-1996	7,722,795	7,336,228	1.05	-2 %
1994-1995	7,624,144	7,180,525	1.06	-1 %
1993-1994	7,038,505	7,036,927	1.00	-7 %
1992-1993	6,890,818	6,892,673	1.00	-7 %
1991-1992	(managed) 7,257,428	6,781,321	(Base Year Rate) 1.07	
1991-1992	6,822,890	6,781,321	1.01	
1990-1991	7,161,455	6,632,448	1.08	

Statewide solid waste disposal reporting began in FY 90-91. The state made slight reductions in per capita waste rates in the early 1990s. Several factors caused these reductions. Tipping fees were established and the additional cost created an incentive to explore alternatives to municipal solid waste or construction and demolition landfills. Strong public and private interest helped local governments start recycling and waste reduction programs in response to state mandates and a perceived disposal crisis. During the early part of the decade, the state and country were in recession. Many waste professionals cite the depressed economy as the primary cause of the waste reduction.

In the mid 1990s, state waste disposal rates increased significantly. Even allowing for two natural disasters, the disposal increase is considerable. The rebounding economy was one cause, but when both the state and nation entered a recession, the expected waste reduction did not occur. As seen last year, the recession analysis model no longer appears useful when analyzing waste management changes.



Landfill Capacity Needs

North Carolina currently has 41 operational MSW landfills. The total remaining capacity of all North Carolina MSW landfills measures approximately 340 million cubic yards with room for approximately 143 million tons of MSW waste. The estimate was obtained using the state's average utilization factor of .60 tons of waste per cubic yard of air space. The estimate does not include waste exported to out-of-state landfills.

If North Carolina's rate of landfill use remains steady at last year's rate of approximately 640,000/tons per month the State would have 18.7 years of landfill capacity remaining. However, the capacity figure is misleading. Much of the state's capacity is not widely available due to permit conditions, franchise arrangements and distance. This remaining capacity also assumes a current level of imported and exported waste. Obviously, increases in the importing of waste into North Carolina could decrease capacity even further.

Examples of limiting factors affecting capacity include the fact that the Camp Lejeune landfill is for Marine Corps base use only; the Alamance County landfill is permitted to accept only Alamance County waste; and the Upper Piedmont landfill is permitted for a maximum 600 tons per day. Many landfills' franchise

agreements only allow them to accept waste from a particular distance around the landfill. Some landfills chose not to accept waste from other jurisdictions, although their permit and franchise allow it. Additionally, landfill owner/operators may elect not to construct or use all of the permitted space.

However, the primary limiting factor regarding access to capacity in North Carolina is distance. The maximum distance that large quantities of waste travels averages less than 100 miles one-way. Minor exceptions exist, but an examination of "waste sheds" or service areas supports this fact.

Clearly, the concept of statewide capacity does not translate into statewide access. Regions of the state have limited capacity. Both eliminating out-of-state capacity and continuing the acceptance of out-of-state waste into NC shrinks this capacity number further. At present, statewide capacity does not appear to be a problem. However, regions may experience disruptions and additional costs as facilities close, open, change jurisdictions or alter the average distance waste is transferred.

Landfill Capacity

VOLUME	*Permitted*	*Total*
Original Available Airspace (yd^3)	137,211,772.0	350,186,543.0
Remaining Airspace (yd^3)	37,878,219.0	259,852.990.1
Remaining Capacity for Tons of Waste	22,707,632.8	143,685,953.4
Remaining Capacity in Years (Avg.TPY)	3.5	23.2
Remaining Capacity in Years(2004-05 TPY)	3.0	19.6

Includes data from the forty-one active MSW landfills in the state

Calculations

- Avg. Tons Disposed Per Month = Tons Disposed / Months of Operation
- 2004-2005 Avg. Tons Disposed Per Month = 2003-2004 Tons Disposed / 12 months
- Utilization Factor = Tons Disposed / Volume of Airspace Used
- Remaining Airspace = Original Available Airspace – Volume of Airspace Used
- Remaining Capacity for Tonnage = Remaining Airspace x Utilization Factor
- Remaining Capacity in Months = Remaining Capacity for Tonnage / 03-04Avg.Tons Disposed Per Mo.
- Remaining Capacity in Years = Remaining Capacity in Months / 12 months

Note: See capacity analysis for state and each MSW landfill at end of this report.

Total MSW Landfill Capacity Analysis for North Carolina

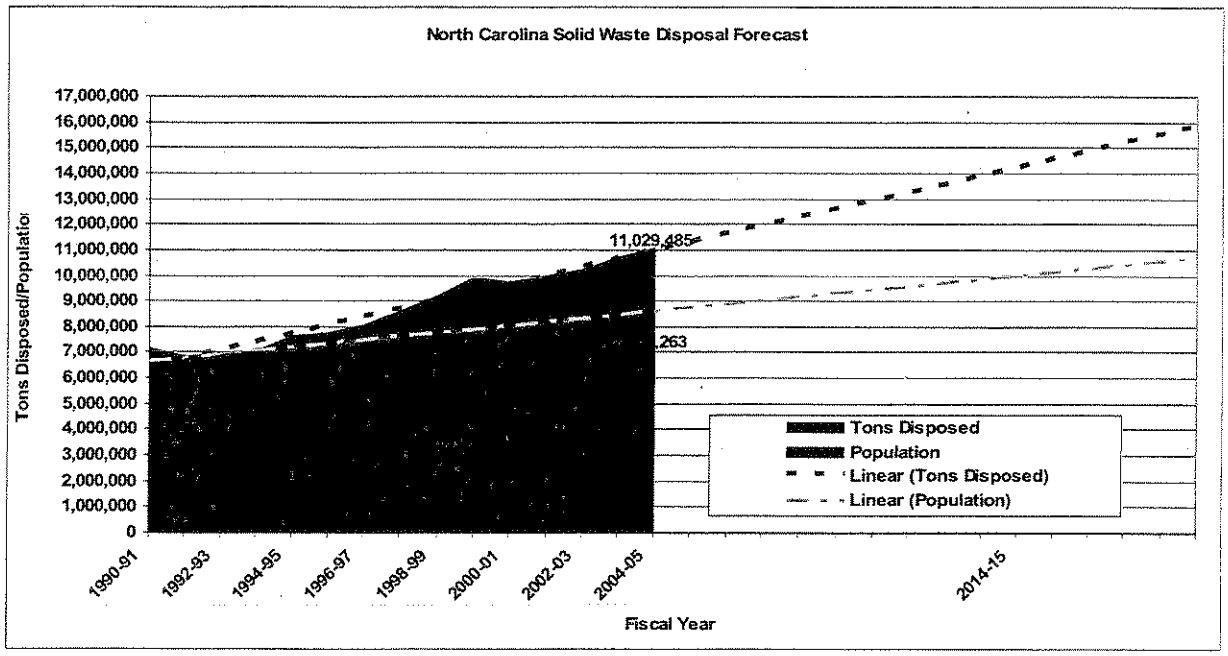
Volume Airspace Used (yd^3)	99,333,552.9
Tons Disposed	59,549,524.6
2004-2005 MSW Tons Disposed	7,673,315.7
Average per Year	6,479,185.5
Utilization Factor (tons/yd^3)	.60
Lifetime Ave. Tons Disposed Per Month	539,932.12
2004-2005 Ave. Tons Disposed Per Month	639,442.97

Future Waste Disposal Needs

Regression analysis helps forecast future waste disposal. In other words, historical trends are used to predict future amounts. Factoring in absolute population growth, North Carolina will dispose of approximately 14 million tons in 10 years and close to 16 million tons in 15 years. This amount equals

nearly a ton and a half of waste for every resident by 2020. The obvious implication of this trend is that demand for landfill space will increase with time as populations grow, less waste is diverted and imports become a larger portion of waste disposed.

The state has recently received several permit applications for sites that would primarily receive out of state waste. This is an additional work load to a section with limited staffing capacity for additional work due to increasing complexity of current and new applications, increase in compliance activities and budget reductions that have occurred over the past several years.



State Waste Reduction Goal

The 1991 amendment to the Solid Waste Management Act of 1989 (Senate Bill 111), established a statewide goal to reduce the amount of landfilled waste 40 percent by 2001. Reduction is measured on a per capita basis. Since FY 91-92, *waste disposal increased 21percent (from 1.07 to 1.29 tons per person per year)*. The statewide goal is unmet and the state per capita rate continues to increase, although several counties achieved the state's waste reduction goal.

Three fundamental, interrelated reasons that contributed to this failure are changes in the dynamics of waste disposal, a lack of commitment to waste diversion, and economics.

Waste management dynamics changed dramatically after the state-wide reduction goal was established. Alternative technologies, such as incineration and mixed waste composting, did not develop as anticipated. Despite a great deal of interest and significant investment in these technologies, they did not decrease landfill disposal as expected. Additionally, the U.S. Supreme Court overturned legislation on flow control and prohibited local governments from directing waste to certain disposal facilities. Legally, waste is a commodity, and is allowed free movement.

The commitment to reduce waste has waned over the years. Local governments perceive the 40 percent goal as "just a goal" and not a mandate. Funding and resources for waste reduction activities never occurred at the levels required or anticipated for waste reduction success. In addition, anticipated landfill bans never materialized.

The economics of landfill disposal evolved since the 1989 adoption of the goal. As private landfill owners competed for tonnages, tipping fees remained low. Landfills did not become as expensive to operate as initially projected. Landfill customers readily adapted to higher tip fees and did not pursue waste reduction as a way to control costs. The combination of strong state and national economies of the early 1990s, moderate disposal costs, and local communities establishing their own goals, reduced the motivation to divert materials from landfills.

Public Participation Initiative

Efforts to gain local government approval to develop or expand landfills can be difficult. Landfills are an essential component of any comprehensive program that safely and economically manages solid waste, but court challenges of recent decisions for new MSW landfills are common. For many years, North Carolina's landfills were mostly county owned and operated. These facilities primarily served the county where they were located. Today, most of North Carolina's municipal solid waste goes to regional landfills located inside or outside of the state. Local governments, private waste management companies, or a combination of the two may own these regional landfills. Compared to local landfills, they serve much larger geographic areas.

Current rules for obtaining a landfill permit require local governments to certify to the state that they have jurisdiction over the proposed location and they have given approval for the facility. The local approval process includes a number of opportunities for public participation. The state permit review process, which follows local approval, considers the local government approval process. The state also conducts additional review procedures. These review considerations make up a significant portion of the legal challenges.

Public response to proposed landfills is intensely negative, especially from citizens who would neighbor proposed sites. The response is consistent and applies equally to regional facilities and "local" facilities that only serve the county where they are located. Local elected officials cite negative public response as their primary reason for denying approval for proposed landfills.

The Solid Waste Section developed a program to offer residents - especially those near a proposed facility by a potential landfill permit decision - more opportunities to participate in the permitting process. After the section receives a site suitability application or a request to modify an existing permit, a series of public meetings is held. The process has two steps. The first meeting is open to residents and businesses that neighbor the landfill. The goal is to reduce the large crowds that commonly attend public meetings so those neighbors can ask questions and engage in dialogue with permitting staff. The second, larger meeting targets the entire county. Where necessary, appropriate government or non-government agencies receive concerns expressed in the meetings.

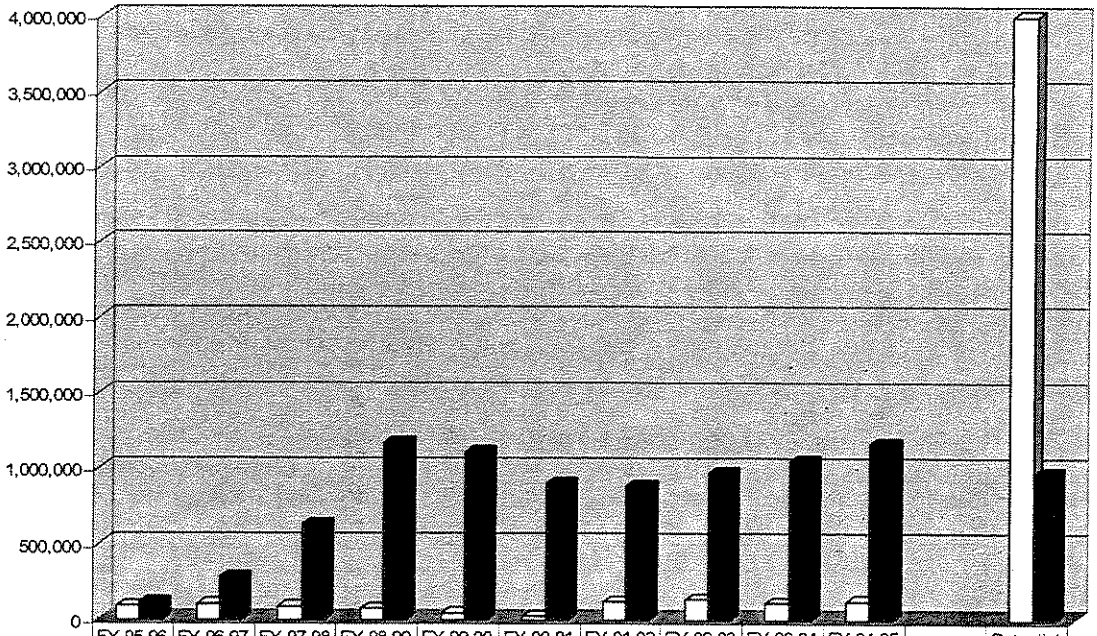
Imports & Exports

North Carolina continues to export more waste than import. Exported waste accounts for slightly over ten percent, or a total of 1,161,926 tons of the total waste disposed in the past fiscal year.

In FY 95-96, North Carolina exported waste to one South Carolina landfill. During FY 02-03, 11 out-of-state landfills received North Carolina waste. Sixty-two North Carolina counties currently export at least some waste to 13 out-of-state landfills and two transfer stations. Back and forth movement - where waste leaves the state only to re-enter for disposal - has continued for the third consecutive year. A transfer station in South Carolina received 96,001 tons of waste from Mecklenburg County, then sent the waste back to North Carolina for disposal. For this reason, the amount has not been included in the report's import or export totals. Imports continue to increase since some North Carolina landfills are located near state borders. In FY 95-96, only one landfill, located in Forsyth County, received imported waste. Currently, nine North Carolina landfills receive imported waste. North Carolina transfer station reports and voluntary reports from out-of-state facilities provide the data used to track imports.

The state has recently received several permit applications for sites that would primarily receive out of state waste. This is an additional work load to a section that has limited staffing capacity for additional work due to increasing complexity of current and new applications, increase in compliance activities and budget reductions that have occurred over the past several years.

Net Imports/Exports of Solid Waste in North Carolina



	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05		Potential
Imports (tons)	88,982	103,510	87,393	74,185	41,840	21,614	117,981	133,145	108,803	119,202		4,000,000
Exports (tons)	111,097	280,400	629,415	1,166,875	1,106,897	900,743	882,247	971,286	1,048,111	1,161,926		971,286

CHAPTER 2
GOVERNMENT WASTE REDUCTION ACTIVITIES

Annual reports received from local governments provide data on source reduction, reuse, recycling and composting activities statewide as well as other aspects of solid waste management. Data from these reports develop a picture of waste reduction efforts in North Carolina and the relative effectiveness of these programs and trends in program implementation.

Source Reduction and Reuse Programs

The number of local governments with source reduction and/or reuse programs decreased slightly during FY 04-05. The decrease from governments reporting programs from 109 to 104 is possibly due to reporting fluctuations; however, the reported number represents the lowest number reported in the past seven years. Most governments overlook source reduction and reuse programs as cost-effective components of a comprehensive waste reduction program. Local governments are encouraged to take advantage of grants that are available for swap shops and backyard composting programs as well as free junk mail reduction materials available from the Division of Pollution Prevention and Environmental Assistance.

Thirty three local governments operate 79 swap shops in North Carolina. Although statistical data is not available to determine the actual amount of reuse that occurs from these swap shops, anecdotal evidence suggests that more than 1500 tons of reuse occur each year from these swap shops. In addition 18 local governments operated paint swaps for exchanging useable paint. These communities reported approximately 55 tons of paint reuse during FY 04-05.

Local Reduction/Reuse Programs

Program Type	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY-04-05
Source Reduction Programs							
Backyard Composting	53	59	64	67	69	68	59
Grass Cycling	41	36	35	29	38	38	33
Xeriscaping	12	11	8	8	11	14	13
Junk Mail Reduction	57	64	64	61	65	63	59
Enviroshopping	35	32	31	27	32	31	29
Promotion of Non-toxics	30	31	33	27	27	28	30
Other	5	6	3	4	2	1	2
Reuse Programs							
Swap Shops	22	23	28	34	33	31	33
Paint Exchange	27	23	19	19	19	18	18
Waste Exchange	8	8	4	3	4	6	8
Pallet Exchange	7	7	9	6	5	9	9
Other	15	10	8	9	11	7	11
***Local Governments* with Programs**	**123**	**110**	**117**	**109**	**112**	**109**	**104**

Local Government Recovery Programs

Total local government recovery increased by 128,000 tons in FY 04-05. The recovery of slightly more than 1.2 million tons marks the third straight year that local government programs have recovered more than a million tons. Part of the increase this year is due to the inclusion of tire recycling for the first time. Historically, tires were not included in tonnages due to uncertainty about tire recovery rates. Recovered

tonnages for tires are now available annually. With tires excluded, local government recovery grew by almost 15,000 tons or 1.36 percent. For comparison, North Carolina's population grew by 1.46 percent and the state's disposed tonnage grew by 3.18 percent over the same period.

In general, local government recovery is divided into two components: organic (yard waste, wood and pallets) and non-organic (all other recyclables). Drought, hurricanes and ice storms can cause drastic fluctuations in yard waste generation, making it difficult to track trends over time. In order to track actual trends in recovery, it is important to evaluate changes with the organics category excluded.

Non-organic recovery increased by 20,716 tons or 4.25 percent during FY 04-05. This increase was driven by a very large increase in fiber recovery. Recovery of glass, plastic and metals decreased during the fiscal year, but these decreases were outweighed by the increase in fiber. The marked increase in fiber combined with a decrease in other commodities is likely a result of how data were reported. The amount of material reported as commingled or mixed during FY 2004-05 decreased by 80,000. The exact composition of materials reported as commingled must be estimated using conversion factors developed from non-commingled materials.

In recent years, the amount of material reported as commingled has increased drastically, resulting in a lower confidence of the exact breakout by commodity. This year's 80,000 ton decrease in commingled tonnage has likely resulted in a more accurate picture of each commodity recovered.

Local Government Recovery (Tons) and Performance Measures

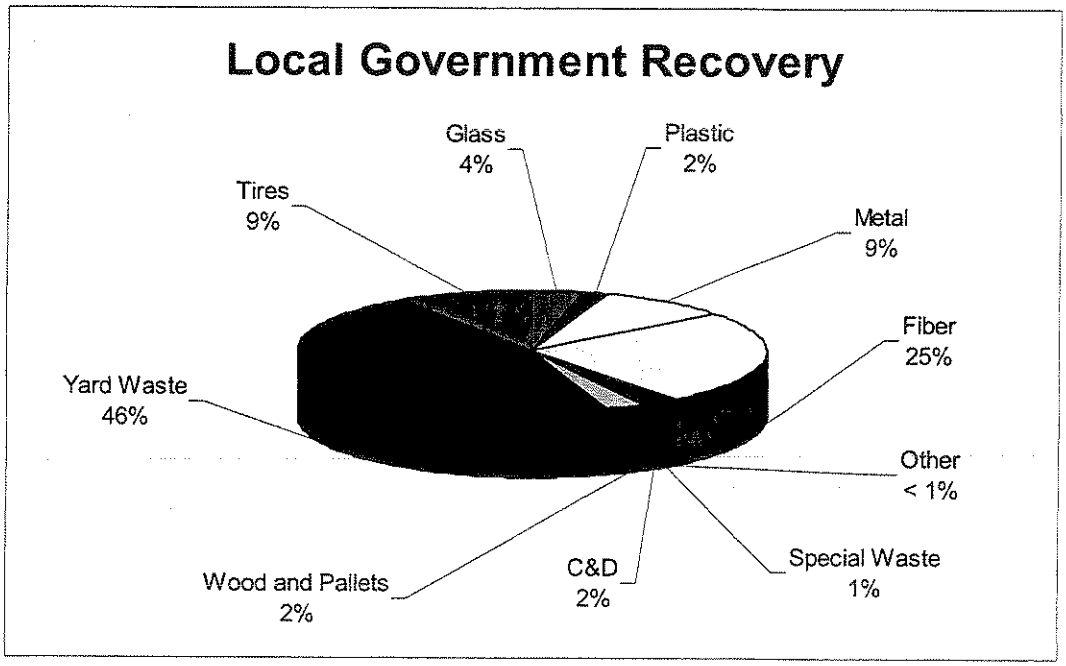
Material	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00
Total Paper	212,577	228,025	216,121	233,339	241,859
Total Glass	49,601	44,978	43,449	41,623	41,826
Total Plastics	16,253	13,699	14,399	14,835	14,474
Total Metal*	65,977	77,252	81,262	77,564	86,480
Total Organics**	498,583	640,410	504,554	525,033	638,757
Special Wastes***	3,212	3,230	3,527	3,817	4,907
Construction and Demolition Debris	N/A	N/A	N/A	N/A	59,598
Tires	N/A	N/A	N/A	N/A	N/A
Other	333	12,762	35,977	63,794	5,329
Totals	**846,536**	**1,020,356**	**899,290**	**960,005**	**1,093,032**
Per Capita Recovery (lbs.)	**235.59**	**279.19**	**242.03**	**254.40**	**285.61**
Recovery Ratio (Recycling:Disposal)	**0.11**	**0.13**	**0.11**	**0.10**	**0.11**

Material	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05
Total Paper	263,365	267,840	275,538	267,371	303,514
Total Glass	46,936	49,891	51,433	52,117	44,003
Total Plastics	15,062	17,269	16,807	18,679	18,320
Total Metal*	92,634	114,786	109,723	114,097	109,612
Total Organics**	540,582	468,901	689,027	589,124	583,101
Special Wastes***	4,947	5,426	5,926	6,271	6,690
Construction and Demolition Debris	15,406	17,648	20,002	24,084	20,292
Tires	N/A	N/A	N/A	N/A	113,670
Other	6,120	5,896	4,626	4,773	5,677
Totals	**985,052**	**947,657**	**1,173,082**	**1,076,516**	**1,204,879**

Per Capita Recovery (lbs.)	**243.66**	**231.47**	**281.88**	**255.76**	**282.13**
Recovery Ratio (Recycling:Disposal)	**0.10**	**0.10**	**0.11**	**0.10**	**0.11**

* Includes white goods, aluminum cans, steel cans and other metals.
** Includes yard waste, pallets and wood waste.
*** Includes electronics, used oil, oil filters, antifreeze and batteries.

The following figure provides a breakout by percentage of commodity's contribution to total local government recovery. As can be seen, local government yard waste mulching and composting programs contribute almost 50 percent of all local government recovery. Yard waste recovery can fluctuate drastically from year to year and is commonly excluded from trend analysis. Fiber products constitute 25 percent of local government recovery and will likely continue to provide for the majority of growth in local government recovery programs.



North Carolina's top 10 waste producing counties continue to represent almost half of all waste disposed in the state. These counties account for roughly 49 percent of all waste disposed in the state and are responsible for almost 47 percent of all materials recovered by local governments. Due to difficulties tracking the management of yard waste and extreme fluctuations that occur on a year to year basis, local government yard waste management is excluded from the table.

Disposal vs. Recycling in Ten Largest Waste Producing Counties FY 04-05

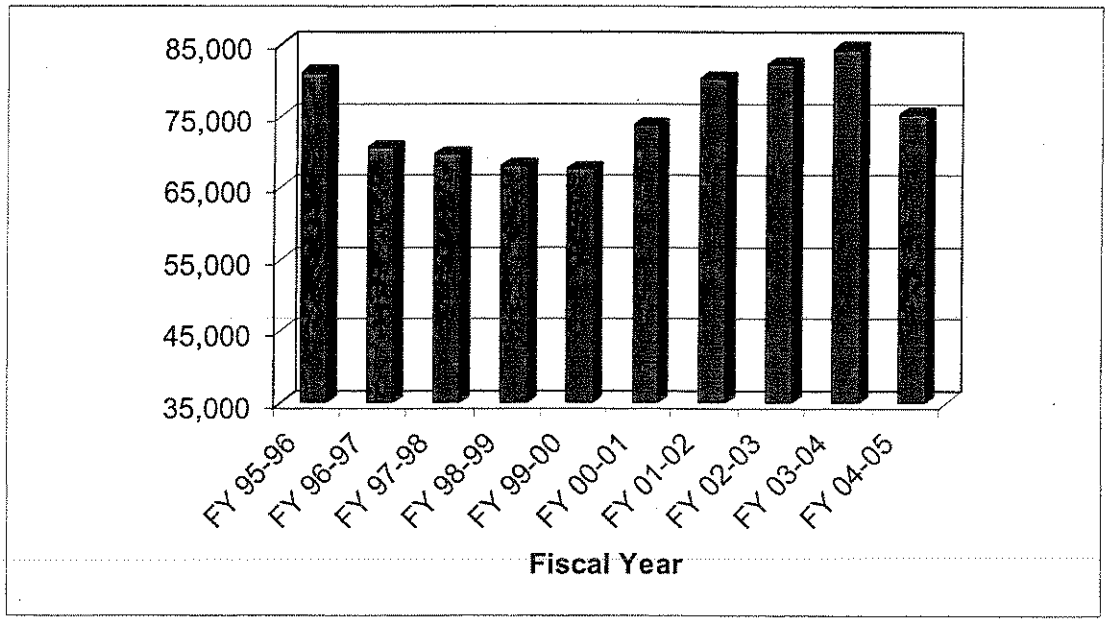
County	Disposal	Recycling	Contribution to Disposal	Contribution to Diversion
Mecklenburg	1,285,489	57,957	11.63 %	10.78 %
Wake	999,535	45,787	9.04 %	8.52 %
Guilford	646,265	46,110	5.85 %	8.58 %
Forsyth	547,094	17,967	4.95 %	3.34 %
Cumberland	510,574	5,830	4.62 %	1.08 %
Buncombe	332,217	37,692	3.01 %	7.01 %
Durham	308,097	17,984	2.79 %	3.35 %
Cabarrus	286,070	5,649	2.59 %	1.05 %

New Hanover	279,268	12,353	2.53 %	2.30 %
Gaston	232,948	5,211	2.11 %	0.97 %
Total	**5,427,557**	**252,540**	**49.10 %**	**46.97 %**

Recovery of Traditional Materials

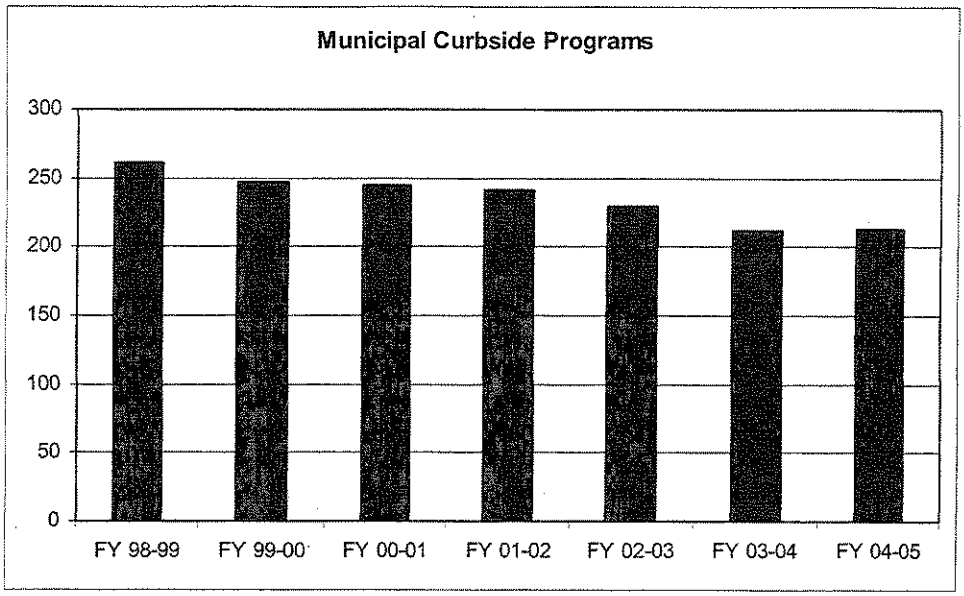
Container recovery decreased for the first time in four years. The decrease to 75,343 tons was most likely a result of a decreased tonnage reported as commingled in FY 04-05. The decrease in commingled tonnage results in a more accurate breakout by commodity. Given the size of the decrease it is likely that high quantities of commingle tonnages reported over the past few years resulted in an inflated estimate of actual container recovery. Of the seven commodities that make up containers, only green glass and PET (#1) plastic experienced increases. Clear glass and brown glass saw the largest decreases, dropping 21 and 23 percent respectively. Despite most of the decreases being linked to the quantity of material reported as commingled, the decrease in clear and brown glass in conjunction with the increase in PET recovery could be a sign of the growing market share for PET beverage containers.

Total Recovery in Tons FY 95-96 to FY 04-05



Local Government Recycling Program Management

The number of local government curbside programs increased by one to 213 during FY 04-05. The very small increase in communities with programs is a positive sign after five straight years of declines. The number of households served by these municipal programs increased by 16,500 to slightly more than 1.2 million households. The total numbers of households served by county and municipal curbside programs increased to 1,384,653, an increase of almost 18,000 households.



Drop-off programs continue to contribute more to recycling than any other type of program. Roughly 46 percent of all material recovered by local governments comes from drop-off recycling programs. The ability of these programs to handle special wastes, white goods and scrap metal is the primary reason why they contribute more than curbside programs. Contributions from mixed waste processing continued to decline, contributing only 0.2 percent of total recovery.

Recovery by Program Type

Program Type	Percent of Total Recovery
Curbside	37 %
Drop-off	46 %
Mixed Waste Processing	< 1 %
Other Programs	17 %

Special Waste Management

The number of local governments offering recycling services for special wastes stayed fairly level in FY 05. According to reported data, a few towns dropped their oil collection programs, but the overall gallons recovered increased about 5 percent, inching up towards closer to 1 million gallons/year. Oil filter collection declined a little both in the number of programs and tons, but both of those figures can be expected to rise as the oil filter disposal ban passed in 2005 takes effect in 2009. Antifreeze jumped mostly because of better reported numbers from Mecklenburg County, while the number of lead acid batteries recycled fell slightly from an all-time high in FY 04. Finally, household hazardous waste tonnage collection also increased by over 10 percent in FY 05 from FY 04, but the cost per ton also went up, reaching almost $2,300 per ton. In keeping with the historical pattern, only a small minority of local governments offered HHW collection services in FY 05

Table : Local Government Special Waste Management, FY00-01 - FY04-05

	FY00-01	FY01-02	FY02-03	FY03-04	FY04-05
Used Motor Oil					
Number of programs	125	127	125	124	119
Gallons collected	839,234	903,951	907,123	939,916	987,057
Oil Filters					
Number of programs	18	20	21	19	17
Tons collected	16.15	17.79	18.64	24.07	20.40
Antifreeze					
Number of programs	54	56	58	63	55
Gallons collected	33,304	27,668	26,308	26,767	41,050
Lead Acid Batteries					
Number of programs	90	86	86	90	89
Number collected	82,043	80,912	92,292	100,217	97,290
Household Hazardous Waste					
Number of programs	24	28	31	32	34
Number of permanent sites	12	17	17	17	17
HHW tons collected	1315.3	1483.97	1540.59	1760.17	1940.57
Total cost reported	$1,792,125 ($1363/ton)	$2,180,355 ($1,469/ton)	$2,161,359 ($1,403/ton)	$2,429,912 ($1,381/ton)	$4,417,657 ($2,276/ton)

Conversions: Oil, 1 gal = 7.4 lbs; Antifreeze, 1 gal = 8.42 lbs; Lead Acid Battery, 1 battery = 35.9 lbs

Yard Waste Management

With no major storm events in FY 05, yard waste collection was on par with the previous year, declining just under three percent in the total tonnage composted, mulched, or delivered directly to end users by counties and municipalities. This "normalcy" for yard waste management is reflected in the chart below, showing the pattern of yard waste tonnage over the past ten fiscal years. The steady performance of local government yard waste collection programs consistently contributes about a half million tons of waste diversion in North Carolina each fiscal year, demonstrating the ongoing effectiveness of the state's yard waste disposal ban.

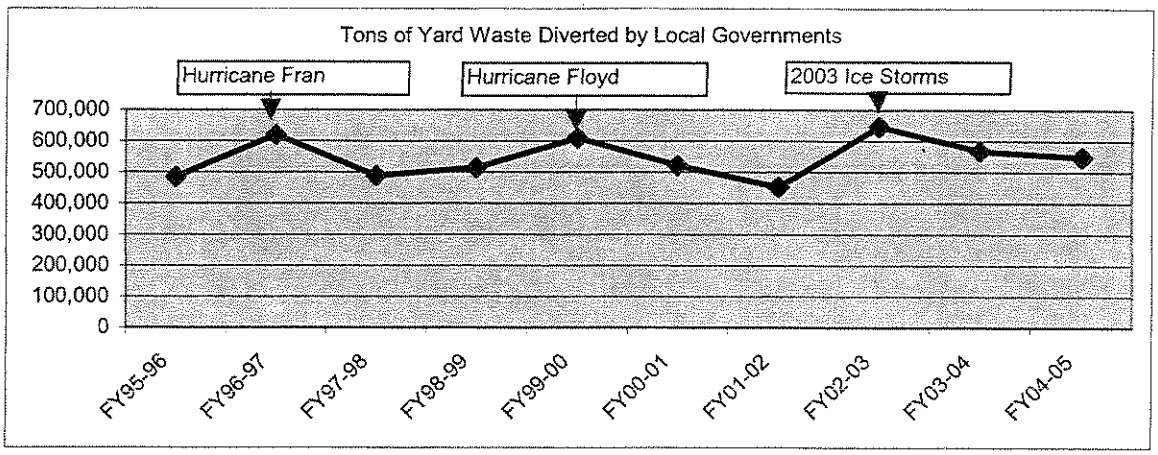
Table: Local Government Yard Waste Management FY04 and FY05

Destination of Materials	FY 03-04 tons managed	FY 04-05 tons managed	Percentage Change
End Users (direct delivery)	58,954	72,413	+23%
Local mulch/compost facility	509,553	481,143	-5.6%
TOTAL DISPOSAL DIVERSION*	**568,507**	**553,556**	**-2.6%**
Other Public Facility**	*83,800*	*141,394*	+69%
Private Facility	120,543	77,079	-36%
LCID Landfill	137,369	132,585	-3.5%
YARD WASTE TOTALS	**826,419**	**763,220**	**-7.6%**

* Tonnages under the row for "Total Disposal Diversion" are not included in diversion because of data redundancy, uncertainty about actual disposition of the waste, and actual disposal of noted tonnages.

** Yard Waste Totals exclude tons for "other public facilities" - it is assumed these tons were captured under other categories.

Chart : Yard Waste Diverted From Disposal by Local Governments, FY96 – FY05



Recycling Markets and Prices

Prices paid for recyclable materials in FY 05 continued a remarkable three-year run of historically above-average performance. Demand for secondary materials both globally and domestically appears to be very strong, driven by a range of factors: China's insatiable need for industrial feedstocks, the emergence of the U.S. economy from a recession, the general shift to reliance on recycled materials among domestic industries, and the relative high costs of energy, which motivates manufacturers to use more energy-efficient secondary resources.

The market picture for North Carolina is displayed in the table below, which shows the average prices received for traditional recyclables by three of the state's major processors through FY 05. Some materials enjoyed a very steady pricing scenario through the year – for example, aluminum, newspaper, and mixed paper. The latter grade has gone from being in very sporadic demand ten years ago to now being a market darling, driven in part by foreign interest in the material.

FY 05 saw a rise in pricing for some materials, including the two main plastic resins and glass. Green glass moved from being a negatively priced material in recent years to now having at least token positive value. The upward movement in glass reflects the increasing need for cullet by bottle manufacturers, who are more interested in using recovered glass when energy prices are high. Energy-related issues are also partially behind the rise for the recycled resins, which tracked close behind the increases in petroleum-derived virgin plastics.

More volatile in FY 05 were the markets for steel cans, which saw a meteoric rise from basically no value a few years ago to an amazingly high $146/ton at the end of 2004, only to drop down to $39/ton by summer 2005. Corrugated and office paper also declined somewhat, although not as dramatically. Office paper grades nationally were affected by increasing supplies coming from paper shredding services, which have become a more prevalent pathway for these materials to be separated and to enter recycling markets. Falling domestic and export demand for corrugated cardboard helped its price move downward, a trend that was continuing into FY 06.

Table: Composite Recycling Market Prices Received by Major NC Processors, FY 05

Materials	Summer 2004	Fall 2004	Spring 2005	Summer 2054
Aluminum Cans, Lbs., loose	$.56	$.57	$.57	$.56
Steel cans, gross tons, Baled	$105	$146	$113	$39
PETE, Lbs. Baled	$.13	$.13	$.17	$.19
HDPE, Lbs., Baled	$.15	$.18	$.22	$.24
Newsprint, ton, baled	$82	$87	$83	$83
Corrugated, ton, baled	$99	$96	$81	$84
Office paper, ton, baled	$143	$150	$128	$116
Mixed paper, ton, baled	$54	$53	$55	$57
Clear glass, ton	$24	$24	$28	$28
Brown glass, ton	$19	$19	$24	$24
Green glass, ton	$0	$0	$2	$2

Table 1 Composite Recycling Market Prices Received by Major NC Processors, FY 05

Figure 1 below shows the price trends for the two major bulk paper grades since 1997: newspaper and cardboard. Note the volatility for corrugated prices through July 2001, but the relative steadiness after that period. Cardboard prices averaged $68 per ton through the middle of 2001 and $80/ton after. Even more impressive is the strength of newspaper over the recent years, especially compared to the previous period. From an average of $48/ton through July 2001, newspaper has enjoyed stable pricing and an overall average of $73/ton since.

Figure 1: Prices Paid for Newspaper and Corrugated Cardboard – July 1997 through June 2005.

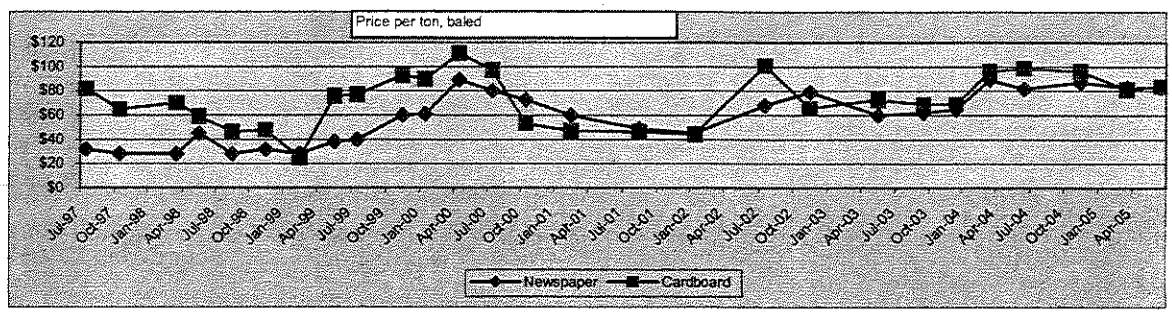


Figure 1 Prices Paid for Aluminum, PETE, and HDPE – July 1997 through June 2005

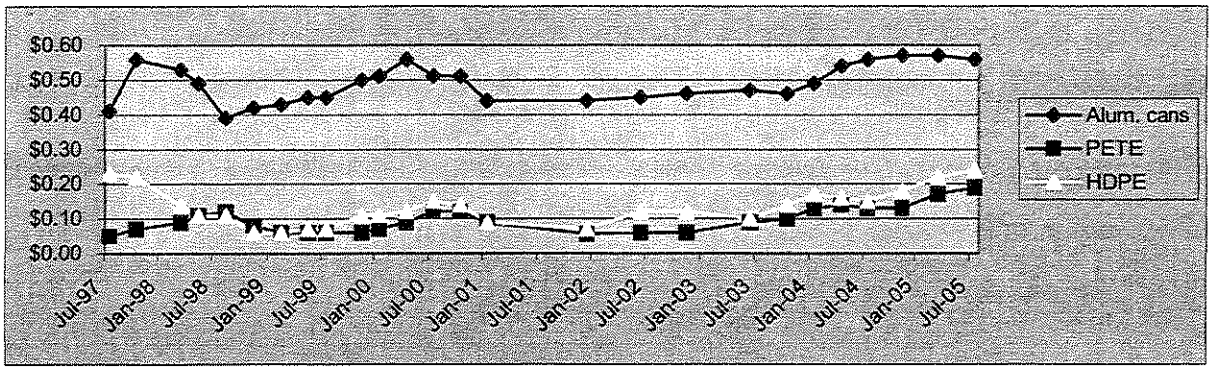


Figure 2

Figure 2 above shows a similar price history chart for three types of container materials: PETE, HDPE, and aluminum cans. The trend lines clearly show the healthy pricing for these recyclables over the past three years, signaling remarkable market stability and new value for community recycling programs in collecting more bottles and cans.

Recycling Impacts on the Economy and Other Developments

The positive picture for recyclable commodity markets and prices has been paralleled by an expansion in the private collection, processing, and end use infrastructure in North Carolina. With over 540 recycling companies in the state, the contribution of material recovery to the state's economy is growing. In a study released in late 2004, the Division of Pollution Prevention and Environmental Assistance documented the steady rise in recycling employment in North Carolina since 1994: from a baseline of an estimated 8,700 jobs, the number of people working in the recycling sector climbed by 60 percent in only ten years to 14,000. The study found that access to more materials is the key to continued growth for many of the states recyclers.

Recycling's economic impact takes form in the start-up and expansion of specific companies across the state. This business upsurge in the past two years has included a new construction and demolition waste recycling plant in High Point and a major new composting facility in Franklin County. With four large commercial operations now active in the state, diversion of inedible food residuals – a commodity that was basically unrecoverable ten years ago - has risen to 38,700 tons per year.

Incremental but steady growth has also taken place in small businesses across North Carolina, including an oil filter recycler in Durham, computer recyclers in Mayodan and Charlotte, a pallet and wood recycler in Rocky Mount, a new glass processor in Elizabeth City, and many others. In general, North Carolina has enjoyed a healthy level of entrepreneurial activity that keeps improving the market situation in the state for an expanding range of materials (65 new companies, most based in North Carolina, appeared in the state recycling markets directory in FY05). Increasing the diversion of recyclables from disposal by local collection programs will be critical to maintaining recycling's momentum in the state.

CHAPTER 3
Local Government Assistance

FISCAL YEAR 2004-05

SOLID WASTE MANAGEMENT TRUST FUND
ANNUAL REPORT

This report details for FY 05 (July 1, 2004 - June 30, 2005) the activities and expenditures of the Solid Waste Management Trust Fund, which is administered by the Division of Pollution Prevention and Environmental Assistance (DPPEA) in the Department of Environment and Natural Resources. The Trust Fund was created by the Solid Waste Management Act of 1989 (SB 111). It is funded by a portion of the revenues from a fee on the sale of new tires and an advanced disposal fee on white goods (appliances), as well as a tax on virgin newsprint. Additional revenues can come from appropriations and contributions. The purpose of the Trust Fund is to support a range of solid waste management activities including: technical assistance to local governments, businesses, and other entities on solid waste issues; public educational programs; research and demonstration projects; and recycling market development (G.S. 130A- 309.12).

As noted in the table below, the Solid Waste Management Trust Fund received $1,023,934 in revenues in FY 05. When added to the beginning balance on July 1, 2004 of $2,189,901, a total of $3,213,835 was managed in the Trust Fund for FY 05. Actual expenditures were $1,321,996, leaving a fund balance at the end of FY 05 of $1,891,839. However, a total of $835,484 of that balance was encumbered for standing grant contracts that have been awarded and for which funding had not been fully disbursed (grant contracts are paid on a reimbursement basis). The unencumbered balance at the end of FY 05 was $1,056,355. An additional set of grant contracts were in the process of being encumbered at the end of the fiscal year, which further reduced the available balance entering FY06.

Summary of Trust Fund Expenditures and Revenues - FY 05

	Total FY 05
Beginning Balance	$ 2,189,901
+ Revenue	$ 1,023,934
- Expenditures	$ 1,321,996
Ending Balance	$ 1,891,839
Encumbrances	$ 835,484
Unencumbered funds on 6/30/05	$ 1,056,355

Breakdown of Revenue Sources FY 05

Revenue Source	Total FY 05
Tire Tax	$ 598,599
White Goods ADF	$ 370,561
Newsprint Tax	$ 92
Appropriations	$ 0
Contributions and Misc.	$ 54,682
Total Revenues	$ 1,023,934

TRUST FUND REVENUE SOURCES - FY 05

Trust Fund revenues in FY 05, as indicated in the table above, came from four of the five possible revenue sources identified in the General Statutes. Activity from each revenue source is described below:

2% Tire tax – Trust Fund revenues from the tax on the sale of new tires accounted for $598,599 in FY 05, an increase of almost 5% from FY 04. Tire revenue accounted for close to 59 percent of total Trust Fund revenues for FY 05.

White Goods Tax – Proceeds from the advanced disposal fee (ADF) on white goods accounted for $370,561 or about 36 percent of total revenues for FY 05. White goods proceeds were up 11 percent from FY 04.

Virgin Newsprint Tax – North Carolina newspaper publishers who fail to meet state-required purchasing goals for recycled content newsprint must pay a $15.00 per ton tax on the virgin newsprint they consume.

The law allows wide exemptions for companies who are unable to purchase recycled content newsprint due to availability or pricing constraints, or who are actively involved in the recovery of newspaper for recycling. During FY 05, $92 was received from the virgin newsprint tax. Compliance with the law has been consistent - in ten years, the annual revenue from the newsprint tax has never been higher than $3,000.

General Appropriations - When the Trust Fund was first established in 1989, a one-time appropriation of $300,000 was allocated to provide an initial fund balance. Since that time, however, there have been no further appropriations to the Trust Fund.

Contributions to the Trust Fund and Miscellaneous Revenues – The Division of Pollution Prevention and Environmental Assistance continued a recycling promotion program in FY 05 that entailed a cost-sharing partnership with local governments and private sector contributors. Local governments contributed or cost-shared $49,682 toward the campaign and private contributors gave $5,000. The list of outreach program partners is provided in Attachment A to this report. More information on the promotion program is provided below.

TRUST FUND EXPENDITURES - FY 05

The bulk of Trust Fund expenditures in FY 05 went to grants and to the state's recycling outreach efforts. Trust Fund resources were also used to continue delivery of technical assistance to North Carolina communities, recycling businesses, and waste generators. These activities are among the explicit purposes noted for the Trust Fund in G.S. 130A- 309.12, and are described in more detail below.

FY 05 Community Waste Reduction and Recycling Grants

The Community Waste Reduction and Recycling Grants (CWRARGs) are a standard annual grant cycle that DPPEA offers to local government and non-profit recycling programs to expand and improve community recycling efforts. The CWRARGs usually include targeted grant categories designed to increase activity in certain program areas or to increase the recovery of certain commodities.

DPPEA held one CWRARG grant cycle in FY 05, which was initiated by a Request For Proposals circulated to local governments and non-profit agencies involved in waste reduction. Funding categories included Backyard Composting and General recycling activities. DPPEA received and evaluated a total of 33 proposals, and selected 25 for a total of $299,696 in grant awards. Details on the grantees and their projects are provided under Attachment B to this report.

In addition to the CWRARG cycles, DPPEA conducts a related, ongoing request for proposals to develop "Swap Shops," which are community reuse centers open to the public. This open grant round resulted in one award in FY 05 to Rutherford County.

FY 05 Business Recycling Grants

In recognition that the growth of private infrastructure is important to the future of recycling in North Carolina, DPPEA conducted a grant cycle in FY 05 for recycling businesses. Small grants can help these businesses afford or leverage a critical capital expenditure and thereby expand their material-handling capacity. These improvements in turn translate into new market opportunities for local government recycling programs and waste generators of all kinds.

The Business Recycling Grant cycle in the spring of 2005 attracted 26 proposals. Nineteen of these proposals were awarded grants for a total of $300,000 in funding. Details on the grantees and their projects are described in Attachment C to this report.

Recycling Guys and RE3 Outreach Campaigns

One of the greatest waste management challenges in North Carolina is increasing household participation in local government recycling programs. High participation raises the efficiency of local programs and results in a greater supply of materials for recycling businesses.

To boost participation rates, DPPEA continued the successful "Recycle Guys" educational campaign in FY 05, completing an ongoing broadcast cycle for the television advertisements that have proven very popular with children. DPPEA also expanded the broadcasts into eastern and western rural areas of the state not previously targeted by the Recycle Guys program.

In addition, DPPEA developed a new comprehensive campaign, RE3, targeted at teen-aged and young adult audiences. RE3 is based on social marketing techniques and on research conducted by the American Beverage Association and others on new messages that appeal to the intended audiences. The new campaign and DPPEA's overall outreach efforts included:

- Eight new television commercials to supplement the existing inventory of Recycle Guys commercials and other ads adapted from the state of Massachusetts.
- Development of a short film on recycling that can be used in local educational efforts.
- A broadcast contract using cable television to reach specific audiences in the targeted age groups.
- Development and production of supplemental materials that helped expand the presence and reach of the campaign.
- Cinema ads, truck ads, posters, and other visual materials used in key communities around the state to increase public awareness of different aspects of recycling
- An extensive effort to train local governments, university recycling coordinators, and environmental educators on how to use RE3 to improve local outreach programs.
- Kick-off events held at community festivals and concerts around the state (e.g., the Azalea Festival in Wilmington, Belle Chere in Asheville, and Speed Street in Charlotte).
- A partnership with Pepsi for promotion of the campaign, and with the American Beverage Association for the concurrent running of a radio campaign in the Triangle area.

All of these efforts were designed to spread the recycling outreach program into new areas and new media, while serving local programs with needed materials and assistance. DPPEA held a series of workshops in the spring and summer of 2005 to train local recycling coordinators how to use the RE3 materials effectively. The training also provided coordinators with information on how to improve the overall performance of their local recycling programs.

Technical Assistance Activities

The General Statutes direct DPPEA to use the Trust Fund to promote waste reduction and recycling generally, and specifically to provide technical assistance to local governments and to build recycling markets. The following section lists a number of activities that DPPEA pursued in FY 05 to accomplish these requirements.

Waste Reduction Partners Program

The Waste Reduction Partners (WRP) is a highly successful program using retired engineers and business professionals to provide environmental technical assistance to companies and local governments in western North Carolina. DPPEA continued its annual funding of WRP with $25,000 to support industrial solid waste audits and other recycling activities. With this funding, WRP helped western North Carolina businesses and other entities divert more than 32,400 tons of solid waste from landfills. The estimated pollution prevention savings for businesses served by Waste Reduction Partners in FY 05 totaled $1.6 million. During the fiscal year, WRP conducted solid waste reduction work in 19 different western counties.

Staff Support

To accomplish the technical assistance, public education, and recycling market development requirements in the General Statutes, the Trust Fund was used in FY 05 to support staff positions in the

Division of Pollution Prevention and Environmental Assistance. A total of $324,641 was expended to pay for salaries, benefits and some limited operational support. These positions are described below:

Recycling Market Development Specialist - This position provides marketing assistance to local governments and others involved in recyclable materials collection. As a part of the Recycling Business Assistance Center in DPPEA, this person is responsible for strengthening recycling capacity for secondary materials collected throughout the state. Among other duties, it manages the recycling markets directory required by state statute.

Recycling Market Development Specialist - This position is shared part-time with the NC Department of Commerce and is responsible for working with local and state economic developers to recruit recycling businesses to North Carolina.

Recycling Market Development Specialist - This position focuses on building the recycling infrastructure for the diversion of construction and demolition debris and wood waste, which together constitute one third of the state's entire waste stream. In addition to managing grants and conducting other technical assistance, this position also produces the *Recycling Works* newsletter, which keeps recycling companies and community recycling programs abreast of market developments, material prices, and news about grants and available assistance.

Waste Management Analyst - In addition to working with local recycling coordinators, this position is responsible for developing educational materials and programs on solid waste issues for audiences ranging from school children to adult populations. In particular, this position implements the multi-media statewide Recycle Guys and RE3 campaigns designed to boost recycling participation rates in North Carolina and make community recycling efforts more efficient.

Waste Management Analyst - This position is responsible for providing technical assistance to local governments on their waste reduction programs, including solid waste planning and full cost accounting (both statutory requirements for local governments). The position also manages recycling program data from state-mandated local waste reduction reports, which in turn allows completion of the State Solid Waste Management Annual Report.

Waste Management Analyst (DPPEA) – This position manages the WasteTrader waste exchange service, provides direct assistance to commercial and industrial waste generators, helps to manage grants and the local reporting process, and is responsible for many training and outreach activities to local recycling programs.

Organics Recycling Specialist (DPPEA) This position provides technical assistance to local governments, recycling businesses, waste generators, and the general public on the reduction and composting of organic waste streams, including yard wastes, which are banned from disposal by state statute.

Graduate Intern Program

Through a contract with the Water Resources Research Institute (WRRI) of the University of North Carolina, DPPEA hires student interns for a full year. Student projects in FY 05 focused on development and implementation of the RE3 outreach campaign.

Product Stewardship Initiatives

"Product Stewardship" is a growing movement by state and local governments to increase manufacturer responsibility for the environmental impacts of their products, including the diversion of those products from disposal to recycling. Greater manufacturer responsibility for end-of-life products will reduce cost and tax burdens on state and local governments. In FY 05, North Carolina participated in product

stewardship initiatives by supporting the activities of the Product Stewardship Institute, including the development of a national agreement with the paint industry on paint disposal. DPPEA also helped lead a multi-state effort to encourage producer responsibility for beverage containers and continued its participation with the Carpet America Recovery Effort (CARE), a national product stewardship program for the carpet industry.

Publications and Outreach Efforts

DPPEA used Trust Fund resources in FY 05 for a number of technical assistance and outreach activities, including: printing and distribution of the *Recycling Works* newsletter and other fact sheets; conducting of workshops and sessions at conferences of the Carolina Recycling Association and North Carolina chapter of the Solid Waste Association of North America; and travel to provide technical assistance to local governments and Trust Fund grantees. DPPEA also produced a study called "Recycling Means Business," to document the impact of recycling on the state's economy.

Workshops and Training

DPPEA used Trust Fund resources to support two series of workshops in FY 05 to train local governments on how to initiate and manage electronics recycling programs, and on how to increase plastic bottle collection in their recycling programs. In addition, DPPEA provided funding and technical assistance to hold a major state conference promoting greater beneficial use of landfill gas.

Temporary Assistance

As in past years, DPPEA used temporary labor to help enter data from over 600 local government solid waste management annual reports. These reports are required by North Carolina statutes and they provide information necessary to complete the State Annual Solid Waste Report.

PLANNED EXPENDITURES FOR FY 06

In FY 06, the Solid Waste Management Trust Fund will be used to provide technical assistance to local government recycling programs and to recycling businesses statewide. As part of that effort, DPPEA will conduct both a community-based and a recycling business grant cycle, helping directly expand collection and processing capacity for recyclable materials. DPPEA will further work to increase the reach of the Recycle Guys and RE3 campaigns. In addition, the Trust Fund will also continue to support the effective Waste Reduction Partners program in western NC, and to help North Carolina participate in national coalitions seeking to promote product stewardship.

Questions regarding the North Carolina Solid Waste Management Trust Fund may be directed to Scott Mouw, Chief, Community and Business Assistance Section, Division of Pollution Prevention and Environmental Assistance, at 919-715-6512.

ATTACHMENT A: TRUST FUND REVENUE SOURCES

The North Carolina Solid Waste Trust Fund received 95 percent of its revenues in FY 05 from two sources: statewide fees on the purchase of new tires and white goods (appliances). The Trust Fund only receives a small portion of the proceeds from these fees. The total distribution arrangement of each of these fees is described below:

Scrap Tire Tax - During this reporting period (July 1, 2004 - June 30, 2005), a two percent fee was levied on the purchase of new tires in North Carolina. The tire tax allocation is as follows:

- 68% of revenues are distributed to the counties on a per capita basis to pay for the proper management of discarded tires.
- 27% of revenues are credited to the Scrap Tire Disposal Account (administered by the Solid Waste Section) for local government grants and nuisance tire site cleanup.
- 5% of revenues are credited to the Solid Waste Management Trust Fund (administered by the Division of Pollution Prevention & Environmental Assistance).

White Goods Tax - During this reporting period (July 1, 2004 - June 30, 2005), a $3 dollar fee was levied on the purchase on all appliances. The white goods tax allocation is as follows:

- 72% of revenues are distributed to the counties on a per capita basis to pay for the proper management of discarded white goods.
- 20% of revenues are credited to the White Goods Management Account (administered by the Solid Waste Section) for grants to local governments for managing discarded white goods.
- 8% of revenues are credited to the Solid Waste Management Trust Fund (administered by the Division of Pollution Prevention & Environmental Assistance)

FUNDING PARTNERS FOR THE FY 05 RECYCLE GUYS and RE3 CAMPAIGNS

The Solid Waste Trust Fund received an additional (approximately) 5 percent of its revenues from partners and other funding sources supporting the Recycle Guys and RE3 educational campaign, as detailed below.

Partner Name	Amount Given
Chatham County	$1,000
City of Burlington	$2,500
City of Durham	$4,000
City of Raleigh	$5,000
Davidson County	$2,500
International Paper	$5,000
Lee County	$1,000
Mecklenburg County	$5,000
New Hanover County	$995
Orange County	$1,000
Pasquotank County	$500
Town of Cary	$5,000
Wake County	$4,000
Winston-Salem	$5,000

TOTAL	$42,495*

* $12,186.88 in additional funds came in as cost-share with communities for promotional materials.

ATTACHMENT B: 2005 COMMUNITY WASTE REDUCTION AND RECYCLING GRANT PROJECTS

GRANTEE	AMOUNT	GRANT DESCRIPTION
New Hanover County	$25,000.00	New Hanover County will expand the capacity of its C&D recycling operation by an estimated 563 additional tons annually with a 25% extension of its concrete sorting pad.
Wayne Opportunity Center	$20,000.00	Wayne Opportunity Center will initiate new business collection routes for office paper, mixed paper, and cardboard and will purchase a shredder/baler to process the office paper.
Surry County	$10,000.00	Surry County will purchase a forklift to assist in the processing of baled cardboard and other recyclable materials
Lee County	$10,000.00	Lee County will implement a C&D salvage program.
Duplin County	$20,700.00	Duplin County will do site-preparation, purchase three roll-off containers, and print promotional literature for its new recycling site at Duplin Commons.
Town of Troutman	$13,779.00	The Town of Troutman will purchase two recycling roll-offs, one eight-yard dumpster, six recycling receptacles, and a concrete pad to serve as a recycling area and will develop and publish promotional recycling materials.
City of Laurinburg	$13,366.00	The City of Laurinburg will implement a school recycling program.
City of Greenville	$25,000.00	The City of Greenville will implement a multifamily recycling program.
Catawba County	$7,000.00	Catawba County will join with the City of Hickory to implement a six-month outdoor advertising campaign to promote waste reduction and recycling.
Cumberland County	$18,500.00	Cumberland County will purchase a baler for recycling plastics.
City of Raleigh	$14,455.00	The City of Raleigh will purchase roll carts and bins to initiate a new recycling collection program for businesses in the downtown Central Business District.
City of Salisbury	$2,500.00	The City of Salisbury will hold a mercury thermometer exchange.
Jackson County	$16,500.00	Jackson County Solid Waste Office will purchase recycling dumpsters to implement a school paper recycling program.
North Iredell Middle School	$6,100.00	North Iredell Middle School will purchase a covered, recycling roll-off container, 20 - 18-gallon recycling bins for offices and classrooms, signage and printed materials to start a recycling program.
Friends of The Great Smokies	$8,000.00	Friends of the Great Smokies will purchase a recycling trailer to provide recycling of containers, paper, and cardboard at the park for employees and visitors.
Rockingham County	$9,930.00	Rockingham County will purchase "Curby" the recycling robot to help provide recycling education at local schools and community events.
Transylvania County Schools	$8,694.00	Transylvania County Schools will purchase recycling containers, bins, and roll carts to implement a mixed paper recycling program throughout its school system.
Wayne County	$8,545.00	Keep Wayne County Beautiful will purchase bins, roll carts, and

GRANTEE	AMOUNT	GRANT DESCRIPTION
KAB		trailers to expand paper collection services to businesses and local government offices.
Cabarrus County	$10,000.00	Cabarrus County will construct a permanent drop-off site for discarded electronics at its C&D landfill and inform businesses and residents of their electronics collection options.
Orange County	$5,000.00	Orange County will purchase and distribute 1000 eight gallon bins to increase recycling participation and collection at apartment complexes.
City of Greensboro	$10,727.00	The City of Greensboro will purchases materials, including truck and cinema advertisements, signage, brochures, and guidebooks to promote and educate citizens about their residential and commercial recycling programs.
Town of Kernersville	$19,400.00	The Town of Kernersville will purchase 35 gallon and 95 gallon rollout recycling carts with stickers. The town will also develop a promotional campaign for the project.
Town of Matthews	$4,000.00	The Town of Matthews will initiate a backyard compost bin distribution program.
Village of Pinehurst	$6,000.00	The Village of Pinehurst will implement a recycling education campaign.
Land of Sky Regional Council	$14,500.00	LOSRC will conduct teacher-training workshops and provide technical recycling assistance, including supplies, brochures, and presentations, to staff and recycling coordinators at Asheville City, Buncombe County, and Transylvania County Schools.

ATTACHMENT C: 2005 RECYCLING BUSINESS GRANT PROJECTS

GRANTEE	AMOUNT	GRANT DESCRIPTION
FCR, Inc.	$28,000.00	FCR will purchase a high capacity two ram baler to assist in efficiency upgrades and provide additional processing capacity for its material recovery facility in Greensboro.
Paper Stock Dealers - Raleigh	$15,000.00	Paper Stock Dealers of Raleigh will install an in-feed conveyor as part of the construction of a new material recovery facility.
Tidewater Fibre Corp.	$20,000.00	TFC will implement a commingled paper sorting system to assist in increasing the fiber processing capacity at its material recovery facility in Durham.
Synergy Recycling	$15,000.00	Synergy will install a processing system to assist in better management and marketing of its plastics waste stream as well as providing additional material destruction services at its Mayodan electronics recycling facility.
Shimar Recycling	$15,000.00	Shimar will purchase an industrial shredding system designed to handle confidential material at its recycling facility in Durham.
Clean Green	$15,000.00	Clean Green will install a used-oil-filter processing system at its facility in Durham.
EcoResin	$15,000.00	EcoResin will purchase and put into use an extrusion line and shredding system.
Engineered Recycling	$10,000.00	Engineered Recycling will install a sink/float tank, steam and gas system for washing and new drive and disconnects for an additional pelletization line.
Cabins Cottages & Bungalows	$20,000.00	CC&B's will expand its deconstruction program thru the purchase of a telescoping boom 9,000lb capacity powered industrial truck.
Envision Plastics	$15,000.00	Envision Plastics will purchase a boiler to upgrade and expand current capacity thru-put of its wash line.
Smoky Mountain Resource Recovery, LLC	$7,000.00	SMRR's Project PVC will be supported by new material handling equipment able to transport C&D recyclable materials from extraction sites to its processing facility.
Habitat for Humanity of High Point	$15,000.00	Habitat for Humanity of High Point will purchase a vehicle to help bring in reusable and recyclable building materials to its resale facility.
Kamlar Corporation	$15,000.00	Kamlar Corp. will purchase and install a Sahara X2 mulch coloring system to upgrade current operations and increase capacity.
McGill-Leprechaun	$28,000.00	McGill will purchase and put into use a grinding and screening system to process pallets, wood waste, gypsum and other materials.
Blue Ridge Plastics	$20,000.00	Blue Ridge Plastics will establish a second plastics wash line to increase capacity.
Ensley Corp	$10,000.00	Ensley Corporation will purchase and install two balers to capture and recycle PETE plastics and corrugated cardboard.
Heartwood Pine Floors	$10,000.00	Heartwood Pine Floors will invest in a 400 Series Horizontal Band Resaw to increase production.
Metal Recycling Services	$12,000.00	Metal Recycling Services will install equipment to assist completion of their metal shredding operation.
CompuTel	$15,000.00	CompuTel will expand its material handling and tracking capability at its facility in Charlotte.

CHAPTER 4
State Agency Purchases of Recycled Products and Reduction of Solid Waste Disposal

ACKNOWLEDGMENTS

Published by the N.C. Division of Pollution Prevention and Environmental Assistance

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DPPEA would like to thank the agencies that diligently submit their reports to our office each year. Your hard work and dedication is very appreciated.

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The Division of Pollution Prevention and Environmental Assistance provides free, non-regulatory technical assistance and training on methods to eliminate, reduce or recycle wastes before they become pollutants or require disposal. Contact DPPEA for more information about this document or waste reduction.

DPPEA-FY05-13. 0 copies of this public document were printed in an effort to conserve resources and money. The report can be viewed online at http://www.p2pays.org/epp/stagencies.asp. Hard copies are available upon request.

January 2006

Introduction

State agencies are directed to use products containing recycled materials by state law, N.C. General Statute 143-58.2(a), and Executive Order. Executive Order 156 was signed in 1999 in support of N.C. Project Green, the state environmental sustainability initiative, and was an updating and strengthening of the original initiative of Executive Order 8, signed in 1993.[1] Purchasing recycled and other environmentally preferable products improves recycling markets, helps reduce environmental impacts from waste, and saves energy and natural resources. Many state agencies and local school districts help achieve these goals through thoughtful purchasing decisions and the use of recycled content products.

North Carolina state government has continued to make progress toward environmental sustainability by offering recycled and environmentally preferable products at affordable prices on state contract. Currently, there are more than 20 categories of products on term contract that offer products with recycled content materials, and several more products available offer some sort of environmentally preferable attribute, including recycled content packaging or energy efficiency. State agencies, and others who can buy from state term contract such as local governments, have a wide degree of choice in the purchase of high quality, cost-effective recycled products on term contract. The list of products can be seen at: **www.doa.state.nc.us/PandC/recycled.htm**.

This document summarizes the efforts of state agencies to purchase recycled products. It fulfills the reporting mandate of N.C. General Statute 143-58.2(f) for fiscal year 2005. It compiles purchasing reports required from 27 state government department and offices, 16 constituent institutions of the University of North Carolina, 54 community colleges and 87 local public school administrative units. In fiscal year 2004-2005, reports were received from 83 percent of agencies (184 out of 221), five percent less than the previous fiscal year. The majority of nonreporting agencies are local school entities, which this year accounted for 30 of the missing reports. About half of the agencies that did not report did not comply with reporting requirements last year either. This data fluctuates somewhat each year. All reporting was conducted online, saving paper and postage.

The N.C. Division of Pollution Prevention and Environmental Assistance is the agency charged with compiling data from agency reports and publishing this summary. Copies of this and past reports may be obtained on-line at **www.p2pays.org/epp** or by calling (919) 715-6505 or (800) 763-0136.

Purchases of Recycled Products

Paper and Paper Products. Reported agency purchases of all office paper and paper products (recycled and non-recycled) in fiscal year 2005 totaled $34,230,877. Last year's paper purchases were reported at $43,733,680, which reflects a 22 percent decrease in overall paper purchases from last year. This is a considerable decrease, as over the last five years, state paper consumption has maintained a steady rate. This can partially be attributed to the decrease in reporting agencies this year.

Reported recycled content paper purchases totaled $24,974,084, an $8.5 million decrease from last year's reported expenditures. Recycled paper constituted 73 percent of total paper purchases reported, a slight decrease from last year. In the last two years, the percentage of recycled content paper purchases has decreased by 11 percent, an obvious decline from the reinstatement of the virgin paper on state term contract, which is available at a lower price. Recycled content paper is a little over two dollars more than virgin paper per box. Although this price difference could easily be neutralized with waste reduction techniques, such as double-sided printing and using one-sided pages for fax machines, it could prove to be a significant obstacle in reaching goals set by Executive Order.

[1] Full text of No. 156 is available online at www.p2pays.org/epp/reports.asp.

This is the fourth year in which agencies failed to meet the goal set forth by Executive Order 156 [2] "State agencies shall attempt to meet the goal that, as of Fiscal Year 2000-01, 100 percent of the total dollar value of expenditures for paper and paper products be toward purchases of paper and paper products with recycled content".

More positively, a significant impact is realized from the state's purchases of recycled content paper. For comparison, assume that the $12 million spent on recycled content office paper and the $4 million on virgin office paper included exclusively 8 1/2X11 white copy paper, all purchased from the state contract. The recycled office paper we purchased conserved 114,666 trees, saved enough BTUs to provide 877 households with energy, and reduced the CO2 equivalent of 915 cars. Over 41 million gallons of water were also conserved, which is the equivalent of 63 swimming pools. The solid waste avoidance could fill 192 garbage trucks, amounting to over 5 million pounds. If we converted the $4 million in virgin paper to 30 percent post consumer recycled paper, we could save another 4,738 trees, 3.2 million more BTUs, and 8 more truckloads of garbage. These comparisons help put the impacts of the state's purchasing decisions in more tangible terms, and exemplify the motives behind our recycled content purchasing efforts[3].

Another element of recycled paper usage includes contracted print jobs. Reported spending on outside print orders was $12.6 million, which is nearly a $3 million decrease. Along with that printing reduction, 66 percent of the orders were printed on recycled content paper, which is up by 15 percent from last year.

More than half of the miscellaneous paper purchased, including items such as legal pads, file folders, labels and continuous feed forms were purchased containing recycled content materials. In 2005, this category improved by 7 percent, which reflects improvement from encouragement and education, as well as their availability on term contracts. Towel/tissue paper achieved an 84 percent containing recycled content, a slight decrease from last year.

Twenty-five agencies succeeded in reaching the 100 percent goal this fiscal year for all paper purchases, equivalent to 2004. This is a slowly climbing number that hopefully represents an overall effort to reach compliance under the Executive Order. Seventy-one agencies, or 39 percent of all reporting agencies, achieved a purchasing rate of 90 percent or higher for recycled content paper products for their paper needs. About a quarter of reporting agencies purchased all their office paper with recycled content, and more than half bought all recycled content towel and tissue products.

[2] G.S. 143-58.3 established a goal that at least 50 percent of all agency expenditures for paper and paper products be comprised of recycled product purchases. Executive Order No. 8 set a goal for agency expenditures of recycled paper and paper products of 65 percent in Fiscal Year 1998. Executive Order No. 156 reestablished the goal at 100 percent by the Year 2001.

[3] These numbers are based on the assumptions outlined in the report. The weight of the office paper was estimated using a calculator at www.replanttrees.org, and the environmental impacts were estimated from the Environmental Defense's paper calculator at www.environmentaldefense.org/papercalculator.

Figure 1. State Agency Purchases of Recycled Paper and Paper Products
Fiscal Years 1994-2005

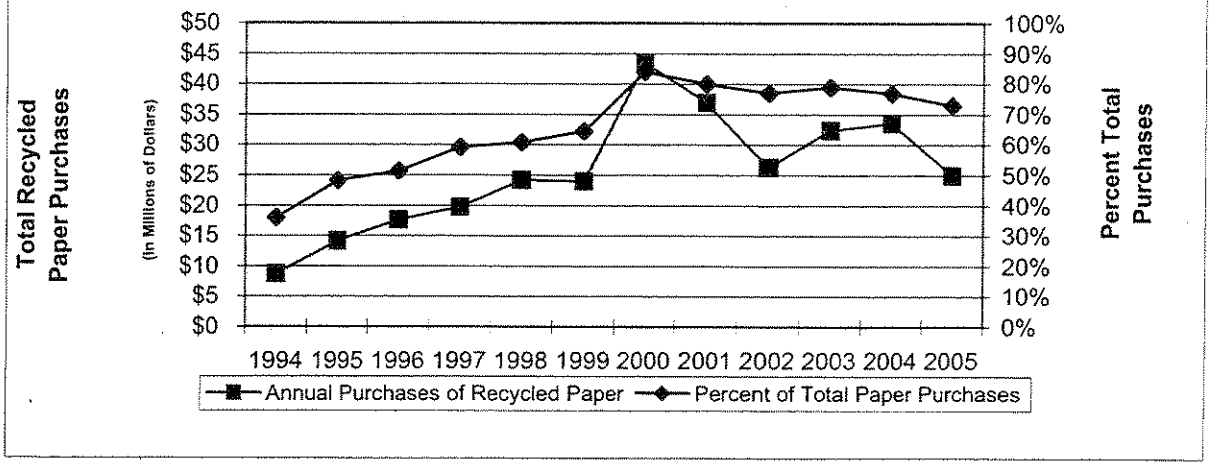


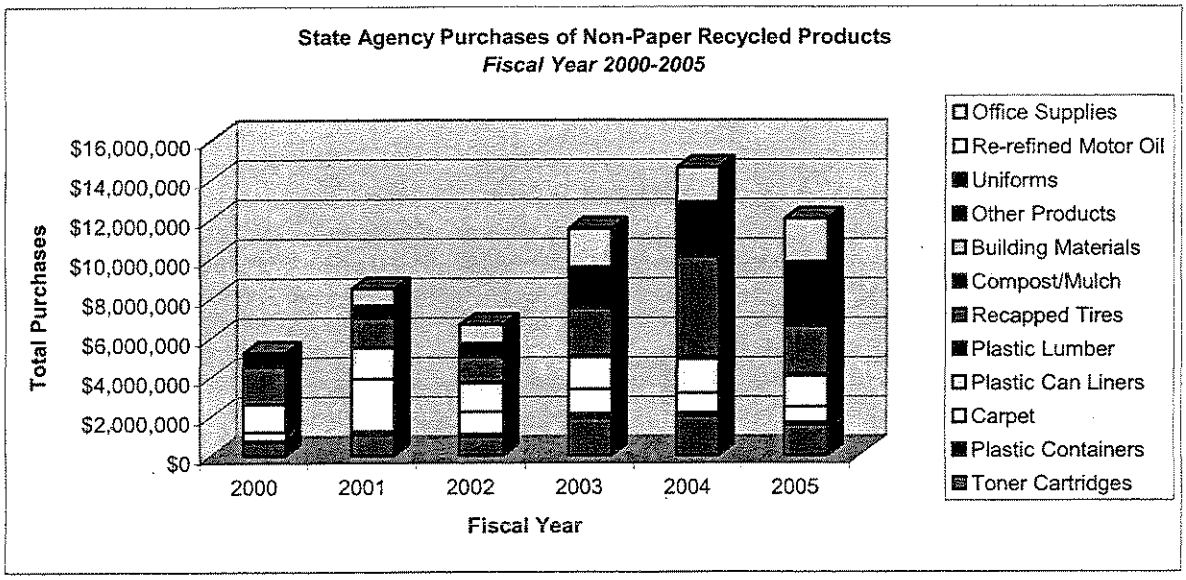
Figure 1 illustrates the trend in overall dollar amounts and percentages of recycled paper purchases over the past 12 fiscal years, including this year's decrease in overall recycled content paper purchases. The data indicates a need to enhance efforts to achieve the 100 percent goal across all agencies. The accomplishment of the goal would be helped by a renewed emphasis and commitment from top management in directing agencies to meet the statutory and executive goals. A targeted campaign of outreach to agencies with a high level of virgin paper purchasing is also warranted.

Policy and Administrative Support. This year, agencies were again asked to report if they had buy recycled policies or goals in place. A mere 37 percent of the reporting agencies responded positively to this question, matching last year's results. Agencies are also reporting that fewer administrators are communicating the importance of purchasing recycled content products. Consistent with past year's data, only slightly more than half of the agencies report receiving this message, and this percentage is on a continual decrease since 1997. Lead coordinators for buy recycled efforts hold steady at less than half of the reporting agencies having this kind of administrative support. While agencies are not required to develop a policy by the General Statutes or Executive Order, it could be the first step to improving our state's effectiveness in recycled content product purchases. Agencies are specifically charged with the responsibility of purchasing recycled content products, as well as designating a lead coordinator. Executive Order 156 requires administrator encouragement, which is a key component to a successful recycled content procurement program. These factors should be examined as a way to significantly increase participation.

Non-Paper Products. Agencies reported spending $11,983,228 on non-paper recycled products in fiscal year 2005, down 18 percent from the previous year's expenditures. This decrease can be attributed to the decrease in reporting agencies from 2004, as well as a better understanding of what the categories include due to outreach and education. In general, non-paper recycled product expenditures has begun to increase, and is expected to continue to rise as purchasers become further educated about the products they buy, and as the array of recycled products grows and becomes more available on term contracts and through vendors. Examples include remanufactured laser toner cartridges, plastic can liners, recapped tires, plastic lumber, compost and mulch, re-refined motor oil, carpet and uniforms.

Total expenditures of the recycled non-paper products reflect similar numbers as last year and are illustrated below in Figure 2. The size of the colored categories represent the total dollars of purchases in that category and the height in that fiscal year represents total purchases of non-paper recycled products. Reports revealed minor fluctuations in most categories with the exception of tires, which decreased by $3 million this year. The "other" category increased by $400,000 and includes lamps, batteries, and cleaning

materials such as rags and mops. Re-refined motor oil purchases decreased again slightly this year, which could be a result of increased cost in the contract.



Other Environmental Purchasing Efforts. Some state agencies have excelled beyond buying recycled, and have begun to tackle more sustainable purchasing issues like environmentally preferable purchasing. EPP, or green purchasing, includes a host of attributes that can be considered to decrease the impact of our purchases on the environment.

Several universities have developed green building initiatives for new facilities or have begun greening energy and water elements in older buildings. Green buildings require architects and contracts to consider many things from building placement, water and energy use and more environmentally friendly products. Other initiatives in state government include the vast efforts, on the part of Motor Fleet Management and other agency departments, to green up their vehicular purchases. Alternative fuel and hybrid cars are very popular requests for new vehicles. Motor Fleet also purchases E85 (a mixture of ethanol and gasoline for the alterative fueled cars), compressed natural gas and propane, and uses re-refined motor oil in all fleet vehicles.

Conclusion

The purchase of recycled content products is a well-established practice in state government, supported by statutory and executive order requirements, as well as state term contracts that offer high quality, affordable recycled content choices for state purchasers. Still, progress must be made to bring agencies to full compliance with the 100 percent recycled content paper goal. The accomplishment or near accomplishment of the goal by almost half of the reporting agencies indicates that it is feasible, given top management support and increased overall awareness of requirements and products.

Several key agencies could, with a few significant purchasing decisions, substantially increase the overall performance of state government in recycled paper purchasing. Converting the current $9.2 million in virgin paper purchases to recycled paper will allow North Carolina state government to contribute substantially to the strength of recycling markets. As a major player in the collection of paper for recycling, state government stands to benefit directly from improved markets. The use of recycled products will also help North Carolina achieve its environmental goals by reducing natural resource, energy and water usage, and preventing air and water pollution. In the case of a product like re-refined motor oil – which meets the exact specifications of virgin oil and is supported for use by engine manufacturers – agency purchases of the product is strongly recommended.

The following recommendations may help to increase recycled content purchasing in the future and help state government meet goals set forth both in Executive Order 156 and General Statutes.

Recommendations

I. Educate agencies about Executive Order 156. Continuing efforts to reach out and network with state agency purchasers will help establish green purchasing efforts as an every day activity. It will also strengthen the ability for DPPEA to collect and manage data related to state agency purchases. Strong and active gubernatorial support can help the state successfully meet executive and legislatively mandated goals.

II. Increase administrative support and educational programs. Disparity among agencies in the degree of support and routine communication received from top management may be the most significant barrier to increased agency participation in recycling and recycled content product procurement. Administrative support is crucial also to the successful implementation of agency sustainability plans under N.C. Project Green that incorporate waste reduction, recycling and environmentally preferable procurement. For those agencies that have not yet prioritized waste reduction and buying recycled, it is recommended that they:

- Implement and adhere to the goals of Executive Order 156, which states that all paper purchased will have a minimum of 30 percent post-consumer content by fiscal year 2000-2001.
- Issue and enforce internal policies, official memoranda and formal declarations that demonstrate administrative leadership and support for buying recycled and Executive Order 156.
- Develop and implement ongoing outreach and education programs for employees and visitors, and take advantage of the assistance DPPEA can offer.

III. Increase Procurement of Non-Paper Recycled Content Products. Outright expenditures for non-paper recycled products continue to lag behind those of paper purchases. A vast variety of products are available with recycled content materials, which is apparent from the federal governments purchasing regulations under Executive Order 13101. Their *Comprehensive Procurement Guidelines* features more than 50 items in eight categories, including paper, non-paper office, construction, landscaping, park and recreational, transportation, vehicles and miscellaneous products (visit http://www.epa.gov/cpg/ for more information). Purchasing a diverse array of recycled content products not only strengthens recycling and job markets in North Carolina, it also helps agencies fulfill their obligation to become more environmentally sustainable. To improve overall buy recycled efforts, state agencies should:

- Expand the quantity and variety of non-paper recycled products purchased through agency convenience contracts and state term contracts.
- Enforce purchasing rules that mandate buying from state term contract above in-house delegations.
- Improve electronic tracking systems for all recycled product purchases.
- Specify or encourage the use of recycled materials and supplies by contracted services, especially in construction, housekeeping and printing.

IV. Make Purchasing Decisions Based On Full Environmental Impact Versus One-Time Cost. To determine the full environmental impact of a product or service, it is important to look at the full life cycle analysis of a product. By doing so, state agencies can begin to make purchasing decisions that will be of benefit in both the short and long term.

- Begin looking at products in terms of broad environmental impacts including: durability, energy efficiency, performance, recycled content and recyclability, toxicity, biodegradability, location of manufacturer (local availability) and packaging. Utilize government programs, nonprofit organizations and third party certifiers for assistance, including EPA (www.epa.gov/opptintr/epp/index.htm), Green Seal (www.greenseal.org), Energy Star (www.energystar.gov), and American Forest and Paper Associations (www.afandpa.org), for example.
- Develop guidelines and checklists for purchasing and contractual services that take into account environmental impact.

Agencies that Purchased 100 Percent Recycled Paper in FY 05

Alexander County Schools
Appalachian State University
Asheboro City Schools
Central Piedmont Community College
Craven County Schools
Davidson County Schools
Franklin County Schools
Guilford County Schools
Madison County Schools
Nash/Rocky Mount Schools
Pamlico County Schools
Randolph Community College
Roanoke Rapids City Schools
Sampson County Schools
Scotland County Schools
UNC Charlotte
Wake Technical Community College
Wilkes County Schools
Wilson Technical Community College
Winston-Salem State University
Johnston County Schools
Insurance, Dept. of
Fayetteville Tech Community College
Haywood Community College

Agencies that Failed to Report Data for FY 05

Alleghany County Board of Education
Avery County School
Bladen Community College
Bladen County Schools
Cabarrus County Schools
Carteret Community College
Carteret County Schools
Charlotte-Mecklenburg Board of Education
Chatham County Schools
Cherokee County Schools
Clay County Board of Education
Clinton City Schools
Coastal Carolina Community College
Columbus County Schools
Dare County Schools
Edgecombe Community College
Graham County Schools
Harnett County Schools
Hoke County Board of Education
Iredell-Statesville Schools
Kannapolis City Schools
Kings Mountain District Schools
Lenoir County Public Schools
Lieutenant Governor's Office
Mitchell County Schools
Northampton County Schools
Pasquotank County Schools
Pembroke State University
Pender County Schools
Pitt County Schools
Randolph County Schools
Robeson County Public Schools
Shelby City Schools
Thomasville City Schools
Tyrrell County Schools
UNC Hospitals
Warren County School

State Agency Source Reduction, Recycling, and Composting Efforts

The Division of Pollution Prevention and Environmental Assistance (DPPEA) collected the recycling report for FY 2005 for the first time since FY 1999. Staff vacancies and other pressing issues prevented DPPEA from conducting this effort as more resources were put behind the recycled purchasing report required by state statute (the recycling report is not required by statute). For FY2005, much time was dedicated to updating the report and report contacts. While only 45 agencies reported data, reinvesting time to contact agencies about their program opened dialogue and will hopefully result in opportunities for DPPEA to provide technical assistance throughout the next year.

Focus was spent primarily on collecting data from universities and community colleges. Of the 45 reporting agencies, 11 were university reports and 29 were from community colleges. In these entities, programs are more defined and records are centralized. Only 5 agency departments reported. Agencies have several challenges that make reporting difficult, including working in leased facilities, sharing buildings with non-state businesses, and gathering data from regional offices.

Another important element of solid waste and recycling data reporting is the status of Raleigh area agencies, which are including in one contract for recycling collection, provided by the Department of Administration and managed by Facilities Management. Data for these collection areas is provided by the collection companies, which this year included three different businesses.

Administrative Support and Source Reduction. A far greater proportion of agencies reported that they receive administrative support for waste reduction than for buying recycled. Seventy-three percent of the reporting agencies said they have support from the top down on instituting recycling programs. More than half of the agencies also reported having a lead coordinator for waste reduction and recycling, but only forty percent reported having a dedicated position, office, or program for these efforts. About a third of the agencies showed they have educational and promotional programs, which is lower than anticipated. Hopefully DPPEA will be able to utilize newly developed outreach and education programs to drive an increase in this area over the next few years.

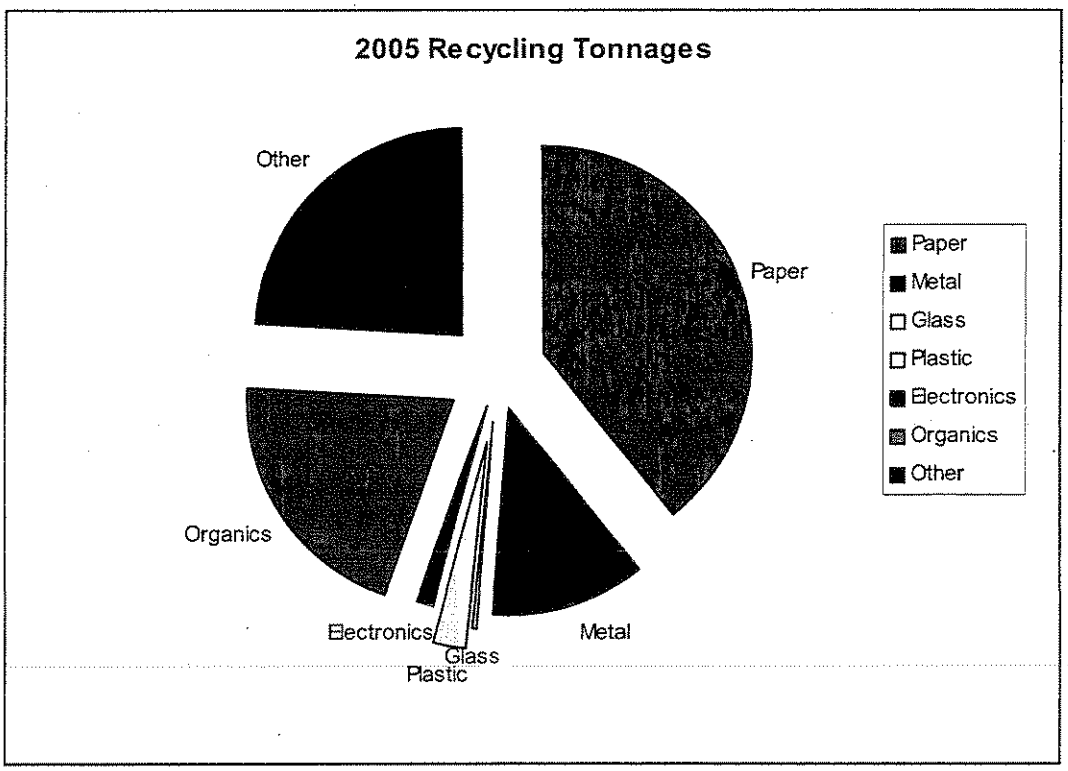
More than eighty percent of the agencies reported practicing waste reduction techniques, although less than a third of them conducted solid waste assessments to gauge this data. Most agencies utilize a variety of waste reduction techniques for paper usage, including eliminating reports and forms or making them electronic, communicating through email and bulletin boards, as well as double sided printing on copier paper or making less copies overall.

Overall Agency Performance. In fiscal year 2005, state agencies collectively diverted 15,560 tons of paper, metals, glass, plastic, electronics, organics, and other items from disposal in landfills and incinerators. This amount represents only a fraction of the 71,344 tons reported in 1999, which is the most recent data available. This shortfall can be attributed to two main factors. Primarily, only a third of agencies completed recycling reports this year compared to 1999. Secondly, this tonnage does not include the downtown Raleigh collection. Data from the Raleigh area contract was very difficult to gather this year but it is estimated to be a considerable portion of recycling and waste tonnages. Utilizing data supplied by the Department of Administration, Orange Recycling Services, and Republic Waste, Raleigh area agencies recycled 1655 tons of materials, which would bring the total to a mere 17,215 tons. This data may not include all four of the Raleigh area quadrants, as one section was collected under a different contract that was not reported, and some agencies supplement collection with their own contract.

Unfortunately, a breakout of the Raleigh area recycling categories by material and tonnage is not available this year. Given the data reported, the projected recycling rate of these agencies would

be 78 percent, a gross overestimate. More than twice as many state employees work outside the Raleigh area as in the capital, many in county office buildings or leased spaces, state parks, prisons, historic sites, hospitals, educational institutions, research stations, and highway construction and maintenance facilities. For fiscal year 2005, department offices and facilities outside Raleigh did not report tonnage data for recycling or solid waste collection. These agencies were requested to report, but were not encouraged as strongly as the university and community college departments.

University and community college recycling was therefore heavily represented in the 15,560 tons reported above. This is a little more than half the tonnage last reported for this group in 1999. The respondents reported recycling 6,105 tons of paper, 1,882 tons of metals, 23 tons of glass, 407 tons of plastic, 3,188 tons of organics, and 3,775 tons of other materials. Many universities and community colleges commented that they now commingle their containers, and the glass and plastic categories may therefore represent estimated numbers or a lump sum of mixed containers.



This year, data was collected on electronics recycling for the first time. Universities and community colleges reported collecting 226 tons of electronics. Agencies and local governments are becoming keenly aware of the need to recycle electronics materials, especially considering the concerns about their contribution of hazardous substances in to landfills and the opportunities to capture valuable resources in electronic products. In FY 2005, the Division of Purchasing and Contracts recognized the desire for a statewide electronics recycling contract, which is available at www.doa.state.nc.us/PandC/926a.htm. Other markets are also available for electronics, and can be further researched by visiting www.p2pays.org/DMRM/start.aspx.

State Agency Solid Waste Disposal and Costs

Based upon available data from Raleigh-area haulers and reported weights from state facilities, institutions, and offices statewide, approximately 55,476 tons of solid waste were landfilled or incinerated in FY 2005, costing about $7.1 million in collection and disposal fees for an overall average cost of just under $128 per ton. This is just a fraction of the 134,599 tons reported in 1999 costing $11.75 million, which attests to the imprecision of the reporting process. Based on FY 2005 data, the agency recycling rate for all wastes managed during the year was about 24 percent. This is an 11 percent decrease from the 1999 report.

Conclusion

While in many ways the revitalization of the recycling report has shown a great percentage of agencies continuing their waste reduction and recycling efforts that were established several years ago, there has not been significant overall improvement. Some agencies, including even community colleges and some universities, are struggling to recycle basic material like cardboard and aluminum cans. Sometimes this is a market issue. More often, it is collection and education issue or is due to lack of funding, which stems from a lack of administrative support.

More encouraging are examples of agencies that have pulled forward as stars in waste reduction and recycling efforts. Many of the universities, including University of North Carolina Greensboro, North Carolina State University, and University of North Carolina Chapel Hill provide a reuse programs including large-scale collection and redistribution of clothing, furniture, household supplies, and sometimes even electronic products. A few universities have conducted sustainability audits over the last year or two, which include energy and water tracking mechanisms as well as waste audits of the campus.

DPPEA has developed a new outreach and education program that is available to all universities and community colleges to help promote and educate about their programs and about the importance of recycling. In FY 2005, many schools took advantage of the RE3 campaign, utilizing posters and commercials on campus. At annual outreach events, including venues from job festivals to Earth Day celebrations, campus coordinators handout promotional materials to encourage students to visit the website to learn more about recycling in North Carolina. To learn more about the RE3 campaign, visit www.re3.org

Some of the variability in waste reduction and recycling performance may result from the inability of many agencies to accurately track tonnages. The problem affects departments and offices more acutely since they often share leased, county, or municipal buildings with other agencies and businesses. For these reasons, data reported by state agencies likely underestimate the true quantities and costs of waste being disposed. Incomplete tracking and estimation may also contribute to fluctuations in reported recycling over time.

The unreliability of the data prevents the assertion that the rise in recycling tonnage has led to a corresponding decrease in the amount of solid waste being disposed of in the state's landfills and incinerators since Fiscal Year 1996. Only with improved awareness of agency solid waste streams and more accurate data collection will an assessment of this type be possible. Data compiled for this report indicate that state agencies are recycling less than a third of their solid waste. Whether agencies have simultaneously achieved waste reduction through their efforts still remains unknown.

Recommendations

Upon review and consideration of the data contained in this report, DPPEA submits the following recommendations to improve the solid waste reduction and buy recycled efforts of North Carolina state agencies.

I. Assess the Impact of Source Reduction and Recycling on Waste Disposal and Costs.
Tracking the amounts of solid waste disposed annually by state agencies is the only way to determine whether efforts to reduce waste, including recycling programs, are impacting

the waste stream. This information, along with data on the costs for collection and disposal of solid waste, can be used to evaluate the cost efficacy of agencies' waste management strategies as well as the costs avoided through waste reduction and recycling. To maximize data recovery and assessment, it is recommended that agencies:

- Conduct waste assessments at their constituent facilities, offices, and institutions.
- Require full accounting for all costs associated with solid waste collection and disposal services.

CHAPTER 5
WHITE GOODS MANAGEMENT

"White goods" are defined in G.S. 130A-290 (a)(44) as, "refrigerators, ranges, water heaters, freezers, unit air conditioners, washing machines, dishwashers, and clothes dryers and other similar domestic and commercial large appliances."

Findings

- The price of scrap metal continues to stay high because of demand in the overseas markets. Many counties that made investments in infrastructure and which manage their own white goods programs are receiving good revenue streams.
- Some counties are realizing that white goods can be valuable revenue generators and are seeking to take back the programs from contractors and third parties. Several are looking to make substantial investments in infrastructure in order to
- increase efficiency and to maximize the revenue potential of scrap metal.
- Even as the price of scrap metal continues to stay high a number of counties continue to have high overhead costs in their white goods programs. Those counties require cost over-run grants to subsidize their deficits.
- Several of those counties with high overhead costs should reevaluate their programs with an eye toward streamlining program efficiency.
- The white goods program's emphasis on improving county infrastructure through capital improvement grants has allowed counties to improve white goods management while at the same time increasing the revenue value of white goods.
- Money requested by counties for cost over run grants continues to decrease. This is due to the high price paid for scrap metal and because of the growth in county efficiency owing to grants for infrastructure.
- White goods program's balance continues to fall due to the decrease in the number of counties that forfeit their advance disposal fees and because of increasing requests for capital improvement funds.
- The program continues to encourage and promote chloroflourocarbon (CFCs) reclamation by providing money to counties for machinery and training of personnel. Refrigerant gas recycling provides another potential revenue stream that counties should be willing to explore.
- Counties need to ensure that white goods revenues are only spent on direct white goods activities.

This interim report is based on information supplied by counties' Annual Financial Information Reports. AFIRs are submitted to the Office of State Treasurer. AFIRs are due by December 1st. Fifty-six counties had submitted AFIRs at the time this report was prepared, on December 23, 2005. A final, revised report will be issued when the remaining counties submit their AFIRs. It should be noted that, in addition to many late county AFIR submissions, many have blank or erroneous entries.

Counties that did not report as of December 23, 2005

Alamance	Ashe	Beaufort	Bertie
Buncombe	Caldwell	Camden	Carteret
Cherokee	Chowan	Columbus	Currituck
Davidson	David	Durham	Franklin
Gates	Greene	Halifax	Henderson
Hertford	Hoke	Hyde	Lee
Lincoln	Madison	Montgomery	Nash
Northampton	Onslow	Pamlico	Pender
Perquimans	Richmond	Robeson	Rowan
Sampson	Scotland	Stanly	Tyrrell
Vance	Warren	Wayne	Yancey

Financial Update

- **The white goods management account no longer runs a large surplus.** The number of counties that forfeit their tax proceeds declined significantly while grant requests also continue to decline, only less slightly. In FY 98-99, 42 counties forfeited tax proceeds. However, by the fourth quarter of FY 04-05, only 8 counties had forfeited their proceeds.
- The amount of forfeited funds available for redistribution dropped 75 percent in recent grant periods, at the same time that county requests for cost overrun grants have recently decreased approximately 20 percent.
- In FY 2003-04, the white goods management account received $539,293.00 in forfeited funds. In FY 04-05, the white goods management account received $289,462.73 in funds forfeited by counties. This represents a drop in revenue of nearly fifty percent.

Advance Disposal Fee

Net white goods ADF collections in FY 04-05 totaled $4,755,963.60. Funds were disbursed as follows:

$ 3,274,434.17	Allocated for direct distribution to counties
$ 909,565.03	Allocated for white goods management account
$ 363,826.03	Solid Waste Management trust fund
$ 218,138.37	N. C. Revenue Department cost of collections
$ 2,984,971.44	Actual amount distributed directly to counties
$ 289,462.73	Forfeited by ineligible counties

Although $ 3,274,434.17 (72 percent of the net disposal fee collections) was allotted for distribution, ineligible counties forfeited $289,462.73. The forfeited funds went to the white goods management account, which receives 20 percent of net collections.

White Goods Management Account

The White Goods Management Account was established to help counties whose costs exceed their share of ADF revenue. The account receives 20 percent of white goods ADF revenues. It also receives funds forfeited by counties whose surplus exceeds the threshold amount. By the end of FY 04-05, the White Goods Management Account had $ 1,095,151.00 in projected commitments and an account balance of $878,734.03, which was slightly lower than the starting balance of $898,588.75 . These commitments include $500,000 for grant requests for the first half of the next fiscal year and $595,151.00 for capital improvement grants obligations. This account is used to fund counties that incur deficits in their white goods accounts and to provide capital funds to counties to upgrade program infrastructure. Counties received $22,043.79 in excess of the proceeds received for distribution in FY 04-05.

WHITE GOODS DISPOSAL ACCOUNT BALANCE FY 04-05

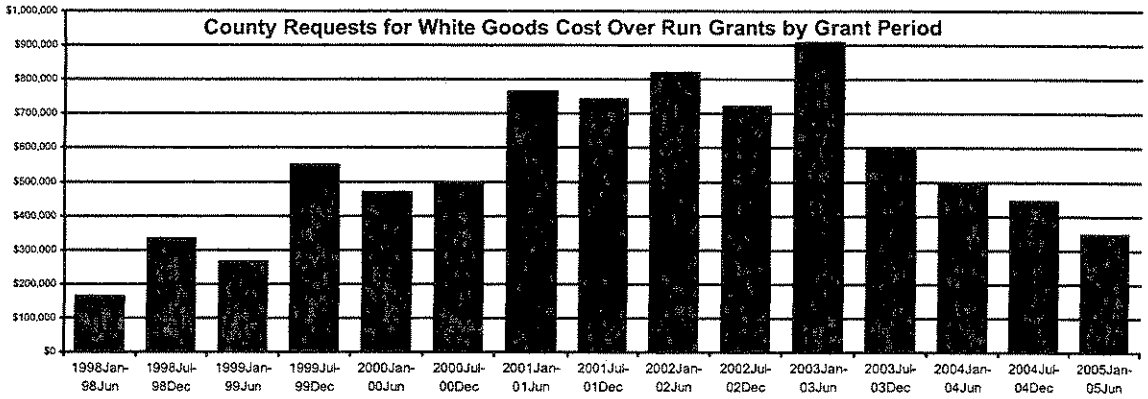
Beginning Balance (July 1, 2004)	$ 898,588.75
Funds Received during FY 04-05	$ 1,199,027.70
Cost Overrun Grants Disbursed in FY 04-05	$ 845,563.58
Capital Improvement Grants Paid in FY 04-05	$ 571,423.76
Monies Needed for Future Grant Awards*	$ 1,095,151.00
Ending Balance (June 30, 2005)	$ 878,734.03

*Includes $595,151.00 reserved for capital improvement grants and $500,000 reserved for next round of overrun grants.

White Goods Management Account Grants

This graph shows that total amounts of money requested by counties for cost over-run grants in recent grant periods has decreased. This is thought to be due to the increasing value of scrap metal. At the end of 2001, the benchmark price (benchmark pricing does not include the costs of

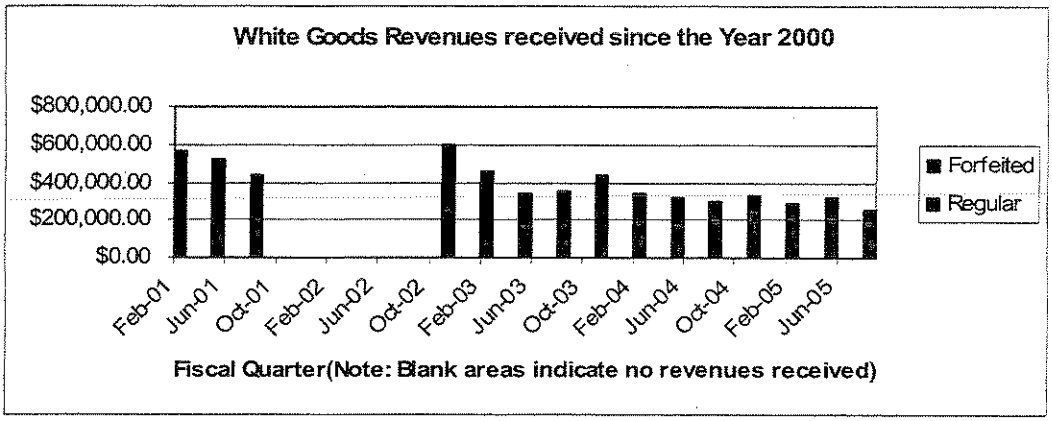
shipping and processing metals) of scrap metals was at $95 per ton. At the end of 2003, the benchmark price was set at $150 per ton. Presently, at the end of 2005, the benchmark price of scrap metal stands at $220 per ton.



Over $274,139.82 in grants went to 23 counties for losses incurred January-June 2005; $331,420.33 was distributed to 24 counties for losses incurred July-December 2004 (Tables 1 and 2).

Capital improvement grants totaling $571,423.76 were awarded to 15 counties (Table 3). *In FY 4-05, counties received $1,176,983.91 in cost overrun and capitol improvement grants, and* $1,199,027.70 *in revenues was received*

As the first graph shows, the total of the amounts of cost over run grants requested have decreased gradually but slightly in recent grant periods. As the next graph depicts, the amount of available funds dropped significantly at the same time grant requests declined only slightly.



Program Results

Grant and ADF funding made it possible to clean up illegal dumpsites. Previously, many counties gave white goods a low priority and under-funded their management. The white goods account makes it possible for counties to obtain the specialized equipment or collection/loading areas needed to improve white goods management.

In FY 04-05, 56 county collection sites took in 44,601 tons, or an estimated 1,115,025 appliances. This compares to the 25,749 tons, or 644,000 appliances, collected in FY 91-92 by all counties. Without the program, large numbers of appliances would have likely been dumped or stockpiled.

White Goods Management by County Governments

The banning of white goods from landfills in 1989 has encouraged recycling and better management. Comprehensive white goods management laws enacted in 1993 included an ADF. In 1998, Senate Bill 124 extended the fee for three years but reduced it from $10 to $3. In 2000, the sunset on the fee was removed.

The major accomplishment of the program is a drastic reduction in illegal dumping of white goods. The critical factor was requiring local governments to provide collection sites at no cost to citizens. Counties can use ADF proceeds to clean sites based on the percentage of white goods at the site.

Another accomplishment came when counties implemented proper management practices to capture and recycle CFCs. The practice avoids illegal venting into the atmosphere, but also creates a potential profit center.

The white goods program is actively encouraging and promoting counties to reclaim more refrigerant gasses from appliances. This is being done by emphasizing that the program can provide funding for the purchase of equipment and for the training of personnel. It is hoped that the net result will be a decrease in the amounts of ozone depleting CFC's accidentally released into the environment, while at the same time opening up a new revenue opportunity for counties.

The white goods program's emphasis on capital improvement grants has enabled counties to acquire the equipment and infrastructure for more efficient white goods management. At the same time, the use of machinery and infrastructure to better manage white goods produces higher revenues from scrap metals.

Though the white goods program has had many accomplishments, some problems remain; these include the limited accountability by counties to assure that tax disbursements and grants are being used for direct white goods costs.

Many local governments are privatizing their white goods management. Overall, privatization does not necessarily mean that programs are more efficient. In many instances privatized white goods management is incorporated into a more comprehensive solid waste contract between a local government and a private firm, making it more difficult to measure program efficiency.

Counties That Forfeited Funds

Counties That Became Ineligible for Advance Disposal Fees In March 2005
(Based on FY 03-04 AFIR Reports)

Anson	Bertie	Buncombe	Burke
Camden	Caswell	Catawba	Forsyth
Graham	Granville	Halifax	Hoke
Jones	Montgomery	Moore	Pamlico
Perquimans	Polk	Richmond	Robeson
Sampson	Surry	Tyrrell	Yancey

Counties That Will Become Ineligible for Advance Disposal Fees In March 2006
(Based on FY 04-05 AFIR Reports)

These are counties that will not receive ADF distributions because undesignated balances exceed their threshold amounts.

Anson	Macon
Cabarrus	Polk
Forsyth	Transylvania
Jones	

Counties that do not submit their AFIR by March 1, 2006 will be ineligible to receive tax proceeds.

White Goods Management Costs

Counties can use the white goods ADF proceeds disbursed quarterly by the Department of Revenue for daily expenses incurred to recycle white goods. Funds can also be used for one-time expenses, such as purchasing specialized equipment and making site improvements for better management. Many county programs are not self-sustaining and require subsidies. Expenses for these programs include fuel, labor and the cost of associated items. Low or high program costs are not necessarily good indicators of program efficiency. This means that counties with minimal costs are not necessarily more efficient than counties with high costs. Some counties with low program costs are marginally in compliance with the law's intent.

The 56 reporting counties spent $4,307,462.00 in FY 04-05. Of this total $2,791,080.00 was for daily operations, $1,121,990.00 for capital improvements, and $394,392.00 to clean up illegal disposal sites.

Counties with high per unit costs usually have extensive intra-county collections, a cost allocation plan, lack a local market, or have a combination of these factors. Counties with little or no disposal costs tend to have minimal programs, poor record keeping, and access to a local market or a combination of these factors. Because of the high value of scrap metal, many counties have metals recyclers willing to provide free pickup from county collection sites and/or provide CFC recovery in exchange for access to the scrap metal. This has the effect of driving down operating expenses, but the benefits to the county decrease, as they do not fully realize the value of their scrap metal.

Highest Operating Costs Reported

County	Cost per ton	Cost per appliance*
Washington	$1227.79	$49.11
Gaston	$234.50	$9.38
Alexander	$221.94	$8.88
Cumberland	$200.73	$8.03
Mecklenburg	$195.01	$7.80
Pasquotank	$150.73	$6.03
Graham	$146.05	$5.84
Chatham	$136.07	$5.44
Wake	$125.28	$5.01
Cleveland	$107.77	$4.31

Lowest Operating Costs Reported

County	Cost per ton	Cost per appliance*
Anson	0	$0.00
Brunswick	0	$0.00
Jackson	0	$0.00
Polk	0	$0.00
Martin	$2.50	$0.10
Iredell	$4.51	$0.18
Wilson	$5.30	$0.21
Granville	$11.31	$0.45
Swain	$12.49	$0.50
Cabarrus	$13.87	$0.56

*Estimate assumes an average appliance weight of 80 pounds.

Outsourcing loading and transport to the recycler can reduce some costs. Other counties use in-house labor to sort and segregate metals, recover CFCs or extract motors or oil.
Overall, operating costs by counties do not seem restricted by geography. Instead, analysis suggests that a correlation to distance to markets, extent of intra-county collections, extent of record keeping, and cost allocation plans among counties have a greater effect on county costs.

Tonnage Collected by Counties

In FY 04-05, 56 counties reported processing 44,601 tons of white goods. This translates into 1,115,025 individual appliances (assuming 25 appliances per ton), or about .13 appliances per person in North Carolina.

Table 1
Grant Requests & Awards from the White Goods Disposal Account for Losses Incurred July-December 2004

County	ADF	Amount Requested	Amount Paid
Beaufort	$9,492.82	$51,477.18	$25,738.59
Bladen	$6,826.48	$4,949.76	$5,850.53
Brunswick	$3,804.93	$26,878.92	$27,574.50
Camden	$1,633.00	$4,716.00	$5,673.08
Chatham	$11,178.41	$26,488.91	$13,244.46
Cleveland	$20,312.03	$76,084.17	$38,042.09
Craven	$19,300.89	$17,561.51	$20,108.33
Currituck	$4,289.04	$8,444.73	$9,010.68
Duplin	$10,572.67	$10,655.29	$7,991.47
Edgecombe	$11,260.24	$3,387.70	$2,540.78
Graham	$1,674.97	$8,144.08	$6,108.06
Hyde	$1,191.06	$8,144.94	$4,072.47
Lenoir	$12,264.51	$49,280.49	$36,960.37
McDowell	$5,190.66	$9,475.82	$9,910.74
Mitchell	$3,316.00	$20,952.00	$15,714.00
Moore	$16,288.69	$4,005.37	$6,154.71
Nash	$14,337.54	$32,201.32	$30,338.77
Orange	$25,170.57	$18,832.04	$9,416.02
Perquimans/ Chowan/Gates	$7,686.00	$4,548.00	$5,662.16
Pender	$9,099.27	$21,893.96	$10,946.98
Pitt	$27,505.96	$7,318.50	$9,698.96

Rutherford	$13,208.19	$4,425.34	$6,168.20
Stanly	$12,297.83	$15,237.60	$16,860.34
Washington	$1,306.46	$10,178.74	$7,634.06

Table 2

Disposal Grant Requests & Awards from the White Goods Account for Losses Incurred January- June 2005

County	ADF	Amount Requested	Amount Paid
Bladen	$5,156.63	$4,162.68	$3,393.60
Brunswick	$15,482.73	$24,312.48	$25,008.06
Camden	$676.00	$6,113.00	$6,113.08
Chatham	$9,703.38	$25,637.47	$12,818.74
Cleveland	$17,631.79	$61,313.70	$45,985.28
Cumberland	$55,644.95	$21,179.86	$21,179.86
Currituck	$3,723.09	$9,438.08	$9,438.08
Duplin	$9,177.57	$27,095.62	$13,547.81
Edgecombe	$9,774.42	$7,924.93	$7,924.93
Hyde	$1,191.06	$2,669.94	$1,334.97
Lincoln	$12,181.46	$4,157.54	$4,157.54
McDowell	$4,505.74	$7,569.94	$7,569.94
Mitchell	$2,878.44	$19,561.73	$19,561.73
Moore	$14,136.35	$8,396.26	$8,393.26
Nash	$16,199.89	$40,993.29	$30,744.97
Northampton	$4,538.91	$1,806.07	$2,405.00
Orange	$25,170.57	$27,989.53	$13,994.77
Pe/Ch/Ga	$7,686.04	$7,041.68	$8,055.88
Pitt	$25,125.50	$2,054.76	$2,054.76
Rutherford	$11,464.79	$10,269.72	$10,269.18
Stanly	$10,675.09	$6,301.17	$4,725.88
Tyrrell	$0.00	$10,080.00	$5,040.00
Washington	$2,804.39	$10,052.47	$10,422.52

Table 3
Capital Improvement Grant Requests

County	Amount	Purpose
Ashe	$4,744.00	skid steer
Ashe	$8,000.00	trailer
Avery	$54,237.95	concrete pad
Caldwell	$56,100.00	skid steer
Clay	$48,927.00	retaining wall
Edgecombe	$5,966.00	concrete
Granville	$36,287.00	concrete pad & tractor
Nash	$15,450.00	concrete pad
Northampton	$46,000.00	concrete pad
Pasquotank	$86,981.90	grapple truck
Perquimans /Chowan/Gates	$8,575.00	excavator
Scotland	$17,976.00	receptacles
Stokes	$61,500.00	metal building
Surry	$54,345.88	concrete slab
Wayne	$66,333.03	knuckleboom loader

CHAPTER 6
SCRAP TIRE MANAGEMENT

Scrap Tire Disposal Account

The Scrap Tire Disposal Account was created by the 1993 General Assembly. It receives 27 percent of its revenues from the Scrap Tire Disposal Tax initiated on October 1, 1993. The 2002 Session removed the sunset on the Scrap Tire Disposal Tax.

Beginning in October 1992, 25 percent of the STDA fund was allocated for cost overrun grants to counties and 75 percent was allocated for clean up of nuisance tire sites. Starting with the August 12, 1997 distribution, 50 percent of the fund is allocated for cost overrun grants, 10 percent for clean up of nuisance tire sites and 40 percent for processed tire material market development grants.

FY 04-05 Balances

Balance of Funds as of July 1, 2004	$4,301,671.41
Deposits Received FY 2004-2005	$3,242,155.63
Total Funds in Account	$7,543,827.04
Grants to County Scrap Tire Programs	$1,716,043.77
Nuisance Tire Site Cleanup Program	$298,560.14
Processed Tire Material Grants	$587,307.97
Balance of Funds as of June 30, 2005	$4,941,915.16
Obligated funds as of June 30, 2005	$3,181,026.53
Net Balance of Funds as of June 30, 2005*	$1,760,888.63

* $3,116,399.45 obligated: $729,037 for tire cleanup, $2,451,989.53 for tire recycling grants under contract and under negotiation

Tire Tax Distribution

Of the state's tire disposal tax revenue, initiated October 1993, 68 percent is distributed to counties on a per capita basis. In the past year, the total amount distributed was $8,140,942.76. This subsidized tire disposal costs for the counties, but did not cover many counties' total expenses. The total distributed to the counties represented 75 percent of the total reported disposal costs of $10,647,136.38. This provided an average of $1.57 for each of the 6.8 million scrap tires handled by the counties.

On January 1, 1994, counties stopped charging tipping fees to dispose of tires that were certified as generated in N.C. (G.S. 130A-309.58). Counties may charge a fee for tires presented for disposal that are not accompanied by a scrap tire certification form verifying the tires were generated in North Carolina, scrap tires stockpiled prior to January 1, 1994, or new tires that are scrapped by their manufacturer because they do not meet the standards for salable tires.

Counties whose scrap tire costs exceed the amount they receive in their allocation of the tire tax can apply for a grant to cover the deficit. For the first grant cycle of this fiscal year, 60 counties requested $1,094,005 and were awarded $767,032. In the second grant cycle, 67 counties requested $1,403,547 and were awarded $949,011.

Funds are available to help counties whose costs exceed their allocation. Historically, the amount of grant funds requested by counties has surpassed availability. Scrap tire legislation requires the Division to consider county efforts to avoid free disposal of out-of-state tires and county program efficiency in using their allocated funds when making decisions about grant awards. The amounts requested and awarded are as follows.

Grant Period	10/01-3/02	4/02-9/02	10/02-3/03	4/03-9/03	10/03-3/04	4/04-9/04
Funds Available	$0*	$792,399	$694,963	$788,202	$834,700	$974,029
Funds Awarded	$811,050	$820,685	$821,583	$816,985	$767,032	$949,011
Grant Requests	53	57	60	61	60	67
Funds Requested	$1,024,935	$1,052,145	$1,011,560	$1,107,107	$1,094,005	$1,403,584

*Used balance in other STDA fund.

Processed Tire Material Market Development Grants Awarded

The goal of the Division's grant program is to make scrap tire recycling sustainable in N.C. This goal can be met. We anticipate awarding grants for manufacturing rubber products such as mats, auto parts, gaskets, flooring material, tire derived fuel, new tire manufacturing and other applications.

The Processed Scrap Tire Material Market Development Grants program received its first allocation of funding in August 1997. Grants awarded to date are:

- Roll-Tech, Inc., Hickory, N.C.
  $212,420.00
  Construct additional molds to increase hard rubber tire manufacture
  COMPLETED
- Continental Tire, Inc., Charlotte, N.C.
  $1,520,000.00
  Develop "tire to tire" technology with 25 percent recycled content goal
  COMPLETED
- Jackson Paper, Inc., Sylva, N.C.
  $377,000.00
  Boiler modifications for tire derived fuel
  COMPLETED
- N.C. State University, Raleigh, N.C.
  $38,291.00
  Tooling development for scrap tire recycling
  COMPLETED
- TIRES, Inc., Winston Salem, N.C.
  $320,000.00
  Produce playground/industrial mats
  COMPLETED
- Texas Encore Materials, Inc. (Carolina Materials LLC), Belmont, N.C.
  $983,360.00
  Manufacture extruded sheets from processed tire material
  COMPLETED
- Roll-Tech LLC, Hickory, N.C.
  $855,937.50
  Equipment acquisition for manufacturing solid rubber wheels

Tire Cleanup Program

A total of 360 nuisance tire sites have been identified in N. C.; 338 have been cleaned and 19 sites have cleanups underway. The remaining three sites are either under investigation or enforcement action. Counties are encouraged to locate and clean all small tire sites through countywide cleanup activities.

Status	Number of Sites	Total Known Tires	Total Tires	Cleared Tires
Cleaned Up	338	7,813,600	94%	7,813,600
Under Clean Up	19	457,034	56%	111,552
Remaining Sites	3	19,000	1%	0
TOTAL	**360**	**8,289,634**	**100%**	**7,927,152**

The law requires the Division to first address nuisance tire sites that pose the greatest threat to public health and the environment. At the program's start, efforts and actions to clean top priority sites were developed and initiated as funds were available. As cleanup funds were received through quarterly distributions, additional priority sites were cleaned.

The section has established and implemented a specific cleanup plan for each known nuisance tire site. As new sites are discovered, prompt investigation leads to a cleanup plan for each site within 30 days. The plan is implemented as soon as possible to minimize potential threats to human health and the environment. The section is committed to the N.C. Big Sweep program, with reimbursements going to counties that request funds to dispose of scrap tires collected by the statewide event.

To date, 176 nuisance tire sites were cleaned using STDA funds. Cost recovery efforts collected $376,088.63 from responsible parties in nine of these sites. Two sites are under cost recovery action.

As a cost saving measure, minimum-security inmates have removed over 600,000 tires from nuisance sites. Counties utilizing inmate labor in nuisance tire cleanups are: Anson, Bladen, Buncombe, Burke, Camden, Chatham, Chowan, Cleveland, Columbus, Craven, Davidson, Halifax, Harnett, Iredell, Lee, Moore, New Hanover, Northampton, Onslow, Perquimans, Richmond, Robeson, Rockingham, Rutherford, Stokes, Surry, Washington and Yadkin.

Scrap Tire Generation

The U.S. EPA standard to estimate scrap tire generation is one tire per person, per year.[4] The 2004 N.C. population was about 8.5 million, so it is estimated an equal number of tires were generated. This includes passenger, truck, and tires for special uses, such as off-road equipment and tractors. Counties report tires received in either tons or the number of tires. Tons can be converted to number of tires. A ton of tires consist of 100 passenger tires, 20 truck tires, or 4 off-road tires (tractors and other large off-road equipment). A more accurate method of converting tons reported to number of tires was utilized for this report, resulting in a lower total number of tires disposed but a more accurate accounting for the three categories of tires.

In FY 04-05, counties reported receiving tires in three size categories: 88 percent passenger car tires, 10 percent heavy truck tires and 2 percent off-road tires. During FY 04-05 counties disposed of 6,769,764 tires (5,933,941 passenger, 676,283439 heavy truck and 159,540 off-road). Comparing tire generation to population results in .80 scrap tires per person.

Tire Volume

All counties are required to provide facilities for scrap tire disposal and to report on their management programs. A summary of this data is presented in the Appendix.

In FY 04-05, North Carolina businesses and individuals disposed of approximately 158,000 tons of tires. These tires were managed by county disposal facilities and private processing facilities as follows:

156,740 tons	Managed by counties and shipped to three NC processing firms
1,261 tons	Managed by counties and shipped out-of-state
8,000 tons	Tires taken directly to processing firms (not managed by counties)
166,001 tons	**Total**

Counties report receiving approximately 157,000 tons of the total 166,000 tons from N.C. disposers. The counties shipped about 157,000 tons to three private recycling facilities; the remaining 1,261 tons were shipped to out-of-state processors.

Three private N.C. processing firms received 157,000 tons from county tire programs and an additional 8,000 tons directly from disposers not participating in county tire programs. These may be individuals involved in privately-funded cleanups or tire dealers not participating in a county program.

[4] "Markets for Scrap Tires," 1991. U.S. EPA, Office of Solid Waste. EPA/530-SW-90-074A. Washington, DC.

The tire program's success is proven by the increase in the number of tires disposed during the past eleven years. Almost all disposed tires are being handled at regulated disposal facilities. However, since free disposal was implemented in 1994, a problem has emerged with illegal disposal of out-of-state tires at county collection sites. The Solid Waste Section estimates that counties spend about $600,000 per year to manage out-of-state tires that are inappropriately disposed as North Carolina tires.
This cost estimate is based on disposal costs in counties with tire volumes greater than 120 percent of the county population (1.2 tires per person). Some counties are regional retail centers or have other factors that cause them to receive an excess volume of tires.

The Section assists counties in avoiding fraudulent disposal of out-of-state tires. County efforts to deter disposal of out-of-state tires is an eligibility factor when awarding grants from the STDA to cover cost over-runs.

County Tire Disposal

There are 98 county programs, including one regional program [Carteret, Craven and Pamlico (CRSWMA)]. Counties reported spending a total of $10,647,136.38 for scrap tire disposal. The reported costs for scrap tire disposal varied greatly. Some counties only report disposal costs while other counties include associated costs, such as personnel or equipment. Counties with unusually low costs may stockpile tires during the year rather than sending them for processing. Some of the fluctuation is probably due to recordkeeping errors or county reporting errors. Also, some counties manage tires inefficiently. For example, counties that allow citizens to dispose tires in "green boxes" or at multiple recycling facilities incur increased labor costs to recover and load tires into trailers.

Tire disposal costs charged by processors are very competitive in N.C. North Carolina processors report that county contracts typically charge $70-$80 per ton, including transportation and trailer rental costs. Counties at a distance from processing facilities may pay as much as $85-$100 per ton.

Tire Recycling

In FY 04-05, 73% of tires received by the three North Carolina processing facilities were recycled. In order of weight recycled, the categories are:

tire derived fuel, civil engineering (including drain field material), crumb/ground rubber, retread/resale, and miscellaneous. The remaining tires go to the two permitted tire monofills in the state. While the recycling rate for scrap tires has continued to increase, the Division actively seeks new opportunities for sustainable scrap tire recycling.

CHAPTER 7
Department of Transportation

By: John Sharp - NCDOT Waste Management Analyst

1. Recycle PAPER: newspaper, cardboard, magazines, office paper, mixed paper, computer printout, telephone books, hardback books, etc.
   2,025,914 Pounds

2. Recycle Metal: aluminum cans, steel cans, scrap metal, white goods, etc.
   2,620,574 Pounds

3. Recycle GLASS CONTAINERS: clear, brown, green, and mixed glass.
   36,127 Pounds

4. Recycle PLASTIC: PETE (#1), HDPE (#2), six-pack rings (LDPE, or #4), mixed plastic, etc.

   38437 Pounds

5. Recycle ORGANIC MATERIALS: wooden pallets, other wood, yard waste, food scraps, used cooking grease, animal manure, etc.

   386,351 Pounds

6. Recycle OTHER MATERIALS: lead-acid batteries commingled materials, textiles/fabrics, motor oil, tires, and asphalt, etc. **5,222,762 Pounds**

7. GRAND TOTAL POUNDS RECYCLED/COMPOSTED:
   10,330,165 Pounds

NCDOT focus over the past year has moved further up the hierarchy of waste management by implementing and educating its employees on Reuse and Source Reduction practices. NCDOT Source Reduction/ Reuse Practices have resulted in over 128 tons of less paper used this past year. NCDOT established a statewide Swap Shop Program that enables all 14,000 NCDOT employees to interact with each for obtaining items or materials that are in the process of being surplus or disposed of.
Total revenues from sale of recycled materials and compost products and the total solid waste collection and disposal costs avoided through recycling and composting were $276,944.

Recycling and Solid Waste Management Report
Fiscal Year 2005

This report is a summary of the recycling and solid waste management efforts within the North Carolina Department of Transportation for fiscal year 2005 (July 1, 2004 - June 30, 2005) as required by G.S. 136-28.8(g). This statute mandates the Department prepare an annual report on the amounts and types of recycled materials specified or used in construction and maintenance operations during the previous fiscal year. The types of recycled materials incorporated into the projects noted would normally contribute to the consumer and industrial waste streams, compounding the problem of declining space in landfills.

Efforts to utilize recycled and solid waste materials are in response to the requirements of G.S 136-28.8. G.S. 136.28.8 (b) mandates the Department to use recycled materials in highway construction projects, specifically:

- rubber from tires for pavements, subbase materials, and other appropriate applications
- general recycled materials for guardrail posts, right of way fenceposts, and sign supports
- recycling technology including but not limited to hot in-place recycling.

All applications of recycled materials are to be consistent with economic feasibility and applicable engineering and environmental quality standards. (See attachment #3 for the complete statute.)

Highway Construction Projects

1. No projects were let this fiscal year that included waste chipped tires as embankment fill material. Two projects, scheduled to be let, in 2006 have been identified for as possible candidates for chipped tire use.

2. Our Division Maintenance personnel reported the re-use of 2,891 tire side-walls as drum ballast this reporting year.
3. The use of fly ash, as a concrete additive, was reported at 100 tons this reporting year and will hopefully continue to rise, as the price of cement increases. The increase in cement prices, due to foreign demand, helps create a higher market value for ash than embankment fill and puts additional limits on availability of potential material for fill projects. No projects let or constructed this year used fly ash as embankment fill. Much usage is likely still going unreported. Efforts continue to track down these volumes and develop means to better track these uses in the future.

4. The number of recycled plastic guardrail offset blocks reported remains strong at 34,835 this year.

5. The use of 3877 tons of recycled glass beads in pavement marking was also reported.

6. The recycling of millings is now being partially calculated using actual mix designs and recycling percentages stated in these designs. This will allow the report to portray a more accurate and inclusive picture of total asphalt recycling across the state in both construction and maintenance operations. A total of 97,324 tons of asphalt pavement millings was reported for this reporting year.

7. Maintenance personnel across the state continue to reuse products including: 400 feet of silt fence/posts and over 300 tons of gravel/ rubble. These numbers will surely grow as we improve our reporting and tracking system in the coming years.

8. See Attachment 1 for quantities of recycled materials used for the 2005 Fiscal Year. Attachment 2 lists quantities from 1989 to June 30, 2005.

9. This next year will include finalizing the development and release of a new, web-based reporting structure that will offer many new features. This new system will ease the burden of users in the field by offering user-friendly data entry options and by accepting values in several common units. This will not only simplify the collection of the data but will greatly increase the power and flexibility of the final annual report.

Continuous Process Improvement

There was a Continuous Process Improvement Conference during this past fiscal year. The next Conference is scheduled for 19 April 2006 in the Kerr Scott building at the N.C. State Fairgrounds.

Website

For up-to-date information on NCDOT's use of recycled materials, visit http://www.doh.dot.state.nc.us/preconstruct/highway/dsn_srvc/value/recycle/

Attachment #1:

N.C. DEPARTMENT OF TRANSPORTATION

RECYCLING & SOLID WASTE MANAGEMENT SUMMARY

FISCAL YEAR 2005 TOTALS (JULY 1, 2004 - JUNE 30, 2005)

Description	Usage	Quantity
Waste Scrap Tires:		
Tire Sidewalls	Drum Ballasts	2891 EA
Glass:		
Glass Beads	In Paint & Long life pavement markings	3877 TONS
Plastic:	Guardrail Offset Blocks	34835 EA
	Plastic Pipe	10,714 LF
	Delineators	3520
Fly Ash:	Concrete Mix Additive	100 TONS
Recycled Asphalt Pavements:	Asphalt Pavement Millings	97324 TONS
	Beneficial Fill Material	300 TONS
	Cement	3056 TONS
	ABC	17,379 TONS
	Concrete crushed for ABC (US 1)	99,867 TONS
Class B Stone	Erosion Control Stone	0 tons reported
Bark Mulch:	Mulch	0 Tons Reported
	Erosion	0 ACRES
Recycled Steel:	Guardrail	0 FT
***Reused Materials:**	Silt Fence and Posts	400 FT
	Reinforced Concrete Pipe	0 FT
	Gravel and Rubble	300 TONS

*These items were salvaged and re-used by maintenance operations.

Attachment #2:

RECYCLING & SOLID WASTE MANAGEMENT SUMMARY
TOTALS JANUARY, 1989 THROUGH JUNE, 2005

Description	Usage	Quantity
Waste Scrap Tires:		
Chipped Tires	Roadbed Embankment Component	11,187,655 TIRES
Crumb Rubber	Crack Sealant Soil Amendment	500 LB 20 TONS (app. 2,025 TIRES)
Chipped Tires	Sound Wall Panels	8,000 TIRES
Tire Sidewalls	Ballast for Traffic Drums	56,747 EA
Lightweight Fill Chipped Tire Material	Soil substitute in culvert backfill	47,211 TIRES
Crumb (Ground) Rubber	Asphalt pavement component	124,512 TIRES
Whole Tires	Retaining Wall	2,500 TIRES
Rubber Mulch	Wood Mulch	*8 TONS* (app. 800 TIRES)
		Total 11,426,559 TIRES
Plastics:		
Plastic Lumber	Guardrail Offset Block	282,624 EA
Plastic Lumber	Type III Barricades	2091 FT
Recycled Plastic Fence Posts	Right of Way Fencing	7,600 EA
Recycled Plastic Delineator Posts	Roadside Safety Delineators	4361 EA
Recycled Plastic Pipe	Subsurface Drain Pipe	33,626 LF
Recycled Plastic Pipe	Fittings (Y, T, & L's)	76 EA
Recycled Plastic Pipe	Temporary Slope Drain	15,437 LF
Recycled Plastic Traffic Separators	Railroad Safety Device	2,922 LF
Glass:		
Glass Beads	In Paint & Long life pavement markings	56,273 TONS
Crushed Glass	Aggregate backfill for subdrainage pipe	95 CY
Crushed Glass	Pipe Foundation Conditioning	333 TONS
Crushed Glass	Aggregate Base	203 TONS
Fly Ash:	Roadbed Embankment Component	865,186 CY
	Additive to asphalt pavement	40,800 TONS
	Concrete Mix Additive	2,418 TONS
	Flowable Fill	126 CY
	Sign post w/concrete core	1,350 EA
Steel Slag:	Aggregate Stone Base	224 TONS
Bottom Ash:	Borrow	2,707 CY
Recycled Asphalt Pavement	Asphalt Mix Additive	1,119,408 TONS
	Hot-in-Place Recycling	1,459,869 SY
	AC from RAP	140,450 TONS
	ABC	23,508 TONS

Asphalt Pavement Millings	Asphalt Mix Additive	222,299 CY
Asphalt Shingles	Asphalt Mix Additive	13,825 TONS
Processed Silica	Borrow	46,072 CY
Recycled Aggregate Base Coarse	Aggregate Base Coarse	18,229 TONS
Class B Stone	Erosion Control	312 CY
Recycled Polyester Resin	Weedmat	963 SM
Recycled Polyester & Hog Hair	Cold Mix Asphalt Patching Material.	20 LB
18" Corrugated Metal Pipe	18" Corrugated Metal Pipe	40 LF
Berm Ditch	Borrow	483 LF
Recycled Asphalt Cement	Asphalt Cement	7,732 TONS
Refurbished Traffic Signal Heads	Traffic Signal Heads	11 EA
Type IV Double Faced Concrete Barrier:	Concrete Barrier	4,171 LF
	Retaining Wall	3,100 LF
Wooden Breakaway Posts	Reuse - Guardrail Offset Blocks	11,409 EA
Concrete:		
Recycled Concrete	Pavement Base Course Material	3,400 TONS
Crack and Seat Concrete	Similar to Rubblizing	260,778 TONS
Rubblized Concrete	Reuse as pavement base course	310,917 TONS
Concrete Pipe	Reuse as Concrete Pipe	2,940 LF
Recycled Concrete	RCA Shoulders	21,505 TONS
Recycled Concrete	Fill Material	18,337 CY
Steel: (reused)		
Beams	Beams	80,000 LB
Guardrail	Guardrail	1,422 LF
Reused:		
Silt Fence and Posts		1300 FT
Reinforced Concrete Pipe		786 FT
Gravel & Rubble		2060 TONS
Landscaping/Wildflowers/Roadside:		
Lime-Stabilized Municipal Sludge	Soil amendment for wildflower beds	704 TONS
Hydromulch	Mulch for grass establishment	38 TONS
Aged Leaf Mold & Yard Debris	Soil amendment	2,370 TONS 1,000 CY
Mallinckrodt Ammonium Sulfate Liquid	Topdressing Fertilizer	420,948 GAL
Soil Derived from Demolition Debris	Soil Amendment	1,742 TONS
Nuggets of Broken Brick	Mulch	1,000 BAGS
Calcium/Sulfur Supplement	Soil Amendment to acidic soils	3 TONS
Bioremediated Petroleum Affected Soils	Soil Amendment	920 CY
Vegetative Clearing Debris	Erosion Control mulch	27 AC
Hog Waste Compost	Fertilizer	25 C Y

Cotton Gin Waste	Soil Amendment	7,130 CY
Clearing Debris	Mulch	327 CY
Hurricane Fran Mulch	Soil Amendment	200,000 CY
Bark Mulch	Soil Amendment	10,434 TONS/ 258,262 CY
	Erosion Control	2 ACRES
Advanced Alkaline Sludge	Soil Amendment	495 TONS 414 AC
Municipal Sludge	Soil Amendment for Vegetative Cover	141.5 AC 8,610 TONS 200 CY
Swine Waste	Bio Soil Research/Experimentation	900 Lb.
Poultry Litter	Fertilizer	425 TONS 11,734 CY

CHAPTER 8
DEPARTMENT OF ADMINISTRATION
Environmentally Preferred Purchasing

The Department of Administration continues to promote the purchase and use of reusable, refillable, repairable, more durable, and less toxic supplies and products. As the Department progresses, more of these products are being added to statewide term contracts, agency specific term contracts, as well as awarded through open market bids. For more information visit the DOA's Web site: http://www.doa.state.nc.us/PandC/

Efforts Taken To Comply With the Session Laws 1993 {G.S. 130A-309.14(al)}

Presently, the bids advertised in the Division of Purchase and Contract contain a Recycling and Source Reduction paragraph in item #10 of Instructions to Bidders. When developing bid invitation language, requirements and specifications, purchasers are continuing to look at alternative methods and products, if such products result in waste reduction and their procurement is both practicable and cost-effective. More specifically, the Division of Purchase and Contract has taken the following steps:

NC E-Procurement @Your Service

NC E-Procurement @ Your Service is a user-friendly, Internet-based purchasing system that offers electronic purchase order processing and enhanced administrative functions to buyers and vendors, resulting in operational efficiencies and cost savings. In the first two full years of operation, the State has used NC E-Procurement to achieve cost savings of $127 million as a result of decreased prices of items purchased by the State.

The program's goals and objectives reflect the State's "One North Carolina" vision outlined by Governor Michael Easley, as well as that of the sponsoring agencies -- the Department of Administration's Division of Purchase & Contract, the Office of the State Controller, and the Office of Information Technology Services' Statewide Information Technology Procurement Office. As of December 2005, the enterprise-wide system has over 43,500 vendors registered and over 13,000 users from more than 237 entities across the state including State agencies, community colleges, local K-12 schools, and local governments.

Another way that E-Procurement has made the interactions between government and business more intuitive is to create an on-line marketplace for informal bidding; this marketplace is known as eQuote. eQuote allows users to submit electronic requests for quotes to vendors, replacing cumbersome manual quoting processes involving phone, fax, or U.S. mail. Vendors respond with their quotes on-line and buyers view the auto-tabulated quotes, award the contract, and submit the purchase order. . After the purchase order is issued, the vendors who responded to the eQuote are electronically notified of the award.

Through eQuote, buyers have reported savings averaging 23%. These savings have been achieved through the increased competition that results from using the on-line quoting tool. Vendors have also appreciated receiving eQuotes – especially the consistent format and straightforward navigation of the on-line tool.

The NC E-Procurement @ Your Service system has achieved the following process efficiencies for the State:

- Consolidated numerous purchasing systems into a single enterprise procurement system enabling the state to gather significant purchasing information, evaluate purchasing patterns, and negotiate better prices with its vendors.
- Streamlined and standardized the current procurement processes, allowing for decreased cycle times and increased process efficiencies.
- Enabled the consistent application of both statewide purchasing polices and agency-specific

business rules.
- Automated approval workflows. For term contract purchases under predetermined dollar thresholds, the workflow feature can reduce the number of approvers and lessen the impact on purchasing agents, allowing these agents to spend time on more value-added activities.
- Provided product-specific electronic catalogs containing items on statewide term contract. Electronic catalogs increase compliance with state contracts, improve the accuracy of issued purchase orders, and reduce the data entry of end users.
- Automated and standardized the informal quote process. Our electronic quoting process replaced calling, mailing, or faxing vendors; and reduced prices by increasing vendor competition through greater vendor participation.

Environmental Benefits

NC E-Procurement @ Your Service also contributes to a sustainable environment by significant reduction in hard copy document reproduction (paper, printers and supplies) and by the use of electronic business transactions and electronic documents.

IPS (Interactive Purchasing System) & Vendor Link NC

The Division of Purchase and Contract continues to promote opportunities for vendors to do business with the state through electronic advertisement of Goods, Services and Design/Construction posting in IPS. The entities using this system consist of State Departments, Institutions, Universities, Community Colleges, Public Schools, Cities, Towns and Counties.

Vendor Link allows vendors to register to receive electronic notification of solicitations. Vendor Link had 18,444 registered vendors June 30, 2005, an increase of 11%. The system continues to grow with the addition of users increasing from 125 Entities with 439 users as of June 30, 2005, an increased user base of 21%.

OPEN MARKET AWARDS

- Office Panel Systems-It is standard procedure to incorporate refurbished language in the bid document for refurbished panel systems.
- Food Product Packaging- Wooden pallets that cases of food are shipped on are exchanged. Also, all of the cardboard cases are recyclable.
- Food serving equipment purchased made from stainless steel that can be recycled at end of use
- 516 bids were awarded last calendar year that support sustainability.

STATEWIDE TERM CONTRACTS

As existing term contracts are re-bid and new term contracts are developed, the Division of Purchase and Contract continues to improve the contracts by offering a wider range of sustainable or environmentally friendly products. These term contracts are listed below.

- **Air Conditioners, Room**, 031A - Items available through this contract were awarded based on the lowest energy efficiency cost, meeting specifications. The majority of the items awarded are Energy Star Compliant, containing recycled materials and packaging.

- Domestic Appliances, 045A - **All refrigerators, washers and dishwashers are "Energy Star" qualified. This is a fairly stringent measurement of energy efficiency, which is monitored by the Department of Energy. The payoff is a more efficient appliance, which use less energy over the lifetime of the product.**

- Batteries, Storage, 060B - **Battery casings are made from recycled material (96%). Batteries are exchanged as a core and picked up by the vendor. In addition the contractor will pick up and properly dispose of junk batteries on quantities less than 20. Core (junk) batteries are**

considered to be an environmental hazard and are otherwise expensive to properly remove.

- Oil Filters, 060C - **Allows for multipacking, which reduces the number of individual boxes for the filters. This helps reduce trash that would otherwise be generated.**

- Tire, Automotive, Recapping and Repairing, 060E - **The retread tire provided should be a premium retread that will provide optimum tire mileage/service and safety. Recycling of tires through retreading and repairing reduces the new purchases and disposal of tire casings.**

- Passenger Cars, 070A; Law Enforcement Vehicles, 070B; Trucks/Vans/Utility Vehicles, 070G - **Bids included an AFV (alternate fuel vehicle) category for each line item. Passenger cars were bid for both standard and alternate fuels, with only the AFV types awarded, including a gasoline /electric hybrid vehicle. Limited availability restricted award of AFV type Law Enforcement and Trucks/Vans/Utility Vehicles. According to the Steel Recycling Institute, 67.7% of a vehicle is steel or iron. Of that steel or iron, 26.6% is post consumer material. Therefore, 18% of a vehicle is made from post consumer recycled material.**

- Remanufactured Toner Cartridges, 207A - **Common use cartridges are remanufactured to equivalency with the original OEM performance. Fewer cartridges are added to the waste stream.**

- **Coolers, Water, Electric, 225A** - Packaging, refrigerant and metal components may contain or are recyclable.

- Large & Specialty Lamps, 285A - **Encourages the use of energy efficient fluorescent lamps and lists products that meet the Federal Energy Management Program (FEMP) recommendations. Some of the lamps contain up to 65% recycled content including glass and mercury. Some of the packaging contains 73% recycled content. Some of the lamps are low mercury (TCLP compliant), non-hazardous.**

- Ballasts, 285B – **Electronic ballasts are more energy efficient, support variable illumination on demand and reduces electro magnetic radiation. A link is provided to FEMP that illustrates ROI for retrofitting with more energy efficient lamps and ballasts. Ballasts contain no PCB's and can be disposed of in the trash. Reduced form factor minimizes packaging and metal enclosure requirements.**

- Carpet, 360A - **Recycled content required is either (1) minimum 5% postconsumer content except that vinyl-backed and other similar hardbacked products contain 20% by weight of postconsumer recycled content, (2) minimum 15% by weight of recovered materials (both preconsumer and postconsumer), or (3) minimum of 25% by weight of recyclable content.**

- **Paper, Computer and Labels, 395B** - This contract is limited to recycled computer paper and continuous stock labels most often used by the State.

- **Fuel, Propane (Tankwagon), 405A** - Metal components may contain recycled materials. Metal is recyclable.

- **Recycled Motor Oil, 405H, 405J** - State Surplus Property disposes of waste oil and antifreeze under contract.

- **Bio-Diesel Fuel, 405L** - B20 blended fuel contains 80% diesel fuel and 20% virgin soy or reprocessed vegetable oil. Approximately 3,449,367 gallons purchased with 689,873 gallons from recycled biomass reduces crude oil consumption.

- Gasohol, 405M - **E-10 blended fuel contains 90% unleaded gasoline and 10% ethanol.**

- Furniture, Metal, Folding Chairs, Tables, Storage Units, Wood Library Furniture, 420 - Furniture, Desks (Wood), Credenzas, Conference Tables, Etc. & Bookcases, Furniture, 425B & C - **Contractors support sustainability through different practices, Mechanical parts can be recycled or replaced – extending service of item. Packaging is recycled and recyclable. Products may be ground up into particleboard. Packaging may contain up to 40% post consumer waste and is reusable. Wood, plastic and metal contain recycled post consumer content and are recyclable.**

- **Furniture, Chairs, Ergonomic, 425E** - Fabric, Chair Cushions may contain up to 100% post consumer recycled content. Packaging contains post consumer waste, is reusable and recyclable after use.

- Lateral and Vertical Filing Cabinets, 425F & 425G - **Cabinets contains from 10% to 30% recycled content. Corrugated boxes have a minimum of 50% post consumer waste and are recyclable. Contractor will purchase back files at end of their use.**

- **Storage, Combination Storage/Wardrobe and Wardrobe Cabinets, 425H** - Cabinets have a minimum of 10% recycled metals. Packaging contains post consumer waste, is reusable and recyclable after use.

- Industrial, Medical and Specialty Gases, 430A - **Are delivered statewide in reusable cylinders and are exchanged when replacement cylinders are needed.**

- **Disinfectants and Odor Counteractants, 435A** - Plastic bottles and shipping boxes are 100% recyclable. Plastic containers for deodorant cake can be recycled after cake evaporates totally.

- External Defibrillators, 465B - **Defibrillators can be refurbished and packaging materials can be recycled.**

- Indoor And Outdoor Waste Receptacles, Food Prep Containers, Pails, and Related Items, 485F - **Most plastic products contain 15% to 20% post consumer recycled content. Packaging contains 10% post consumer recycled content. Some containers are sold to customers to assist with sustainability management. For example the aluminum can recycle bins support recycling procedures recommended to users. Metal parts contain recycled content.**

- **Brooms, Mops, Brushes, and Other Cleaning Implements, 485G** - Products may contain up to 60% post consumer recycled content. Packaging may contain up to 40% post consumer recycled waste. All cotton mops are made of cotton waste. Shipping boxes are recyclable. Broom handles can be used as wooden dowels for multiple purposes; such as garden stakes, hanging banners in classroom, etc. Forty-five percent of broom material is biodegradable.

- **LED Vehicle Traffic Signal Modules, 550A** - Traffic signals employing the high efficiency light emitting diode (LED) technology consumes 90% less energy than conventional signals, while providing greater reliability, long-lasting, and low-maintenance performance. Signals are certified for ENERGY STAR for reduced energy consumption.

- Material Handling Carts/Trucks, 560A - **Very few products are made from virgin steel. Products are not shipped in cartons.**

- **Musical Instruments and Accessories, 580B** - New designs use recyclable plastics. Band instruments may be traded in to be reconditioned and re-sold. Donations of trade-in instruments to the Links Program for the needy promotes music education. Plastic and brass parts may be recycled for future part replacement. Cardboard and pallets are recyclable.

- Calculators, 600A - **Packaging material may be recycled.**

- Dictation/Transcription Equipment, 600C - **Vendors use recycled items (approx. 10%) and are ISO 9000 compliant. Packaging contains from 60%-100% recycled content.**

- Office Supplies, 615A - **Contractors are required to the extent feasible and practical, to offer as many recycled products, including packaging, especially those having post-consumer waste content. Wherever possible and practical, such products should be identified as such.**

- **Napkins, Bathroom Tissue, and Paper Towels, 640A** -Contains 100% recycled fiber, 40% post-consumer recycled fiber.

- Office Paper, 645A - **Contains both 100% and 50% post consumer and chlorine free copy paper. Other recycled and virgin paper products including envelopes are supported.**

- Cameras, Digital & Film, 655A **-The metal camera bodies, plastic parts and packaging materials can be recycled. Contract also includes the digital cameras and electronic storage media that promote reduction, reuse, and recycling and reduced environmental impact. Soft copy images can be easily transmitted to distance locations. Chemicals used in manufacturing and processing of the film are eliminated. Typically only proofed images are printed. Electronic storage media has a long lifetime before replacement. Even when the images are printed, the user can decide if high cost paper and toner are required. Disposal of the images on paper has less environmental impact than the toxic metals contained in film.**

- **Bags, Plastic, Trash, 655B -** May have up to 15% recycled content.

- Laminators & Laminating Film, 665A -**Some of the film contains 5% post consumer content. Packaging contains 25%-80% post consumer content.**

- Ammunition, 680A - **Brass shell casings can be saved and recycled and others can be reloaded.**

- Wiping Cloths, 735A - **All items are second-hand textiles. Vendors resell waste instead of sending to landfills. All recycled textile rags can be sold to make paper products. All rags can be re-laundered.**

- **Vending Machines And Money Changers, 740B -** Packaging, refrigerant and metal components may contain recycled content and are recyclable.

- **Markerboards, Tackboards and Accessories, 785B -** Metal and wood components contain recycled materials.

- **Teaching Equipment, Electricity/Electronics Courses, 924A -** Office paper, cardboard and metal enclosures have recycled content. Documentation provided in soft copy instead of hard copies printed materials.

- **E-85 Fuel - Agency Specific Contract for use by Motor Fleet Management.** E-85 blended fuel contains 15% unleaded gasoline and 85% ethanol. Fuel is used in the flex fuel vehicles compatible for E85 fuel. Approximately 338,880 gallons purchased with 288,048 gallons from ethanol.

- **Electronic Equipment Recycling Services, 926A -** Assists agencies and local governments with CRT disposal prohibition and in diverting surplus or discarded electronic products from landfill disposal.

Items Aiding Waste Reduction Purchased By State Agencies through Term Contracts and Open Market

The following items purchased by State agencies meet the criteria for aiding waste reduction by being reusable, refillable, repairable, more durable, and/or less toxic than their traditional counterparts:

Reusable

Ammunition, Cartridge Refills
Digital Cameras (reduces need for film and chemicals)
Freon Recovery System (filters reusable)
Musical Instruments
Rechargeable Dry cell Batteries
Recycled Carpet and Virgin Carpet
Recycled Paper
Recycled Content Furniture (not traditional wood)
Printers
Solvent Degreaser (reuses solvent)
Tire Recapping & Repairing Service
Uniforms, Vacuum Bags, Wiping Cloths

More Durable

Above-Ground Vaulted Fuel Storage Tanks
Classroom Furniture, Electronic Lamps & Ballasts
Vacuum Cleaners, Floor Polish, Grader Blades
Grader Slope Attachment, Kindergarten Furniture
Paint Brushes, Plastic Lumber, Mattresses
Plastic Tableware, Staplers
Vertical File Cabinets, Wood Case goods
Wood library furniture

Energy Star – Reduced Energy Consumption

Audio Visual System,
Changeable Message Signs – Solar Powered
Domestic Appliances
Lighting Fixtures,
Room Air Conditioners,
Sonography Equipment
Television & Video Equipment, Lamps
Traffic Signals – LED,
Ultrasound Scanner

Refillable

Ammunition-Cartridge Refills
Batteries -Vehicle & Storage
Drums – Steel, Fire Extinguishers
Cylinders for Welding, Medical & Specialty Gases
Fuel Tanks, Liquid Hand Soap
Self-Contained Breathing Apparatus

Repairable

Defibrillators, Musical Instruments
Tire Recapping & Repairing Service

Refurbished/Rebuilt

Aircraft Engines, Ferry Engine Repair Parts
Medical Diagnostic Equipment & Instrumentation

Remanufactured Toner Cartridges for Laser

Scientific Equipment, Sewing Machines

Less Toxic

Alternative Fuel Vehicles, Correction Fluid
Dry Cell Batteries, Electronic Lamps & Ballasts, Fertilizers/Farm Chemicals,
Inks for printing (using non-petroleum-based inks)
Instructional Art Materials, Markerboard Markers
Mattresses, Scientific Products (eliminating Freon), Refrigeration and A/C Equipment

Longer Lasting

Floor Maintenance Machine Batteries, Library Furniture, Aluminum Nuts and Bolts – non-rusting alloys, Fluorescent electronic ballasts permit longer lamp life

Recyclable
Commodity Packaging, Commodity Metal enclosures & parts, Plastics, Steel &

Ultrasound Training Simulator Equipment
Warning Lights - Vehicles Safety
Water Coolers

Used - Automobiles and trucks

Reinforced Concrete Pipe, Chain Link Fencing, Electrical Wire, Treated Lumber, Motor Oil – refined, HVAC & Refrigeration Equipment. - Refrigerants

Washable - HVAC Filters Wiping Cloths

APPENDIX A-1: PUBLIC AND PRIVATE MUNICIPAL SOLID WASTE AND CONSTRUCTION AND DEMOLITION LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

PERMIT #	FACILITY	TONS						FACILITY TYPE
		1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	
1304	BFI-CHARLOTTE MTR SPEEDWAY LANDFILL V	1,101,504	1,000,909	1,026,065	1,116,525	1,080,396	1,072,224	MSWLF
8202	WI-SAMPSON COUNTY DISPOSAL INC	577,190	447,290	613,534	775,052	940,344	849,094	MSWLF
6204	UWHARRIE ENV. REG. LANDFILL	531,407	685,584	671,808	700,619	706,997	729,158	MSWLF
0803	EAST CAROLINA REG LANDFILL	504,330	447,290	443,058	396,601	574,897	507,877	MSWLF
9209	WAKE COUNTY LANDFILL-NORTH	598,202	589,252	375,365	349,902	367,681	371,635	MSWLF
0403	CHAMBERS DEVELOPMENT MSWLF		49,979	216,576	225,788	234,976	288,249	MSWLF
3402	HANES MILL ROAD LANDFILL	301,098	323,049	287,953	274,119	238,948	274,561	MSWLF
7304	UPPER PIEDMONT REG LANDFILL	248,401	220,253	217,643	239,251	219,366	238,823	MSWLF
4112	GREENSBORO, CITY OF	275,061	269,228	259,080	251,505	237,057	219,090	MSWLF
2509	CRSWMA - LONG TERM REGIONAL LANDFILL	117,751	167,504	174,864	183,703	204,988	211,127	MSWLF
1403	FOOTHILLS ENVIRONMENTAL LANDFILL	173,271	165,086	170,687	198,767	187,696	203,788	MSWLF
2608	FORT BRAGG C&D LANDFILL	101,102	91,743	138,914	50,441	50,324	189,861	CDLF
6013	NORTH MECKLENBURG C&D LANDFILL	269,545	206,805	181,045	192,669	172,186	180,578	CDLF
2601	CUMBERLAND COUNTY LANDFILL	131,134	132,410	129,407	136,812	123,416	173,797	MSWLF
1107	BUNCOMBE COUNTY MSW LANDFILL	120,143	122,333	146,690	160,863	170,170	173,774	MSWLF
6504	NEW HANOVER COUNTY LANDFILL	163,860	148,792	117,637	117,867	187,387	171,425	MSWLF
9228	RED ROCK DISPOSAL, LLC			33,984	166,165	143,815	168,931	CDLF
1803	CATAWBA COUNTY LANDFILL	173,722	174,900	164,469	165,142	164,590	168,140	MSWLF
4903	IREDELL COUNTY SANITARY LF	111,914	121,341	121,253	128,291	134,241	149,417	MSWLF
9231	MATERIAL RECOVERY/ BROWNFIELD RD C&D LA					59,505	141,043	CDLF
6019	MECKLENBURG COUNTY LANDFILL	14,972	135,498	82,031	93,011	120,260	140,348	MSWLF
6709	ONSLOW COUNTY SUBTITLE D LANDFILL	118,411	103,057	104,967	107,639	120,106	131,685	MSWLF
4103	GREENSBORO, CITY OF	140,184	162,592	201,856	162,190	143,319	126,427	CDLF

APPENDIX A-1: PUBLIC AND PRIVATE MUNICIPAL SOLID WASTE AND CONSTRUCTION AND DEMOLITION LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

PERMIT #	FACILITY	TONS						FACILITY TYPE
		1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	
3412	OLD SALISBURY ROAD CDLF	77,372	93,100	104,808	103,277	110,229	117,119	CDLF
5103	JOHNSTON COUNTY LANDFILL	94,599	89,683	93,267	97,595	103,501	108,751	MSWLF
6505-I	NEW HANOVER WASTE-TO-ENERGY FACILITY	112,132	108,381	120,751	123,823	74,984	104,755	MSWLF
2906	DAVIDSON CO MSW LINED LANDFILL	101,864	101,991	100,991	93,351	96,265	104,040	MSWLF
1306	HIGHWAY 49 C&D LANDFILL AND RECYCLING	11,586	57,101	57,453	61,571	85,975	101,695	CDLF
4104	HIGH POINT CITY OF - LANDFILL	151,049	148,349	148,546	156,155	139,743	99,207	MSWLF
7803	ROBESON COUNTY LANDFILL	96,147	96,089	86,678	93,423	106,336	95,585	MSWLF
2301	CLEVELAND COUNTY LANDFILL OPEN	70,776	70,845	69,495	86,717	94,600	94,667	MSWLF
9606	WAYNE COUNTY LANDFILL	106,239	79,809	88,437	88,943	94,800	92,938	MSWLF
7904	ROCKINGHAM COUNTY LANDFILL	80,379	80,402	79,675	79,800	77,027	89,388	MSWLF
5504	BFI-LAKE NORMAN LANDFILL	61,317	103,598	121,364	74,612	85,398	85,247	CDLF
0104	AUSTIN QUARTER SWM FACILITY	85,040	94,979	90,027	97,059	95,056	82,685	MSWLF
4116	WCA OF HIGHPOINT,LLC					17,948	75,782	CDLF
8003	ROWAN COUNTY LANDFILL	80,714	69,471	69,131	73,350	79,166	75,524	MSWLF
9230	HWY 55 C & D LANDFILL, LLC				41,177	80,279	72,421	CDLF
3606	GASTON COUNTY LANDFILL	77,839	67,901	72,704	86,228	65,903	70,905	MSWLF
8606	SURRY COUNTY MSWLF	51,975	56,947	50,087	51,565	64,828	69,190	MSWLF
1007	BRUNSWICK COUNTY CDLF	59,996	26,231	31,829	42,009	51,994	63,913	CDLF
9704	WILKES COUNTY MSWLF	71,136	59,143	60,635	60,114	61,686	61,649	MSWLF
0105	COBLE'S C&D LANDFILL	40,482	99,226	79,036	78,328	57,962	57,825	CDLF
6801	ORANGE COUNTY LANDFILL	62,404	58,955	56,597	56,925	57,143	56,308	MSWLF
4407	HAYWOOD CO WHITE OAK LANDFILL	47,187	43,260	48,893	49,580	42,580	56,055	MSWLF
7407	C & D LANDFILL INC.		2,981	25,687	39,769	40,607	54,373	CDLF
4903	IREDELL COUNTY C&D UNIT	50,585	47,735	43,806	43,783	53,758	54,252	CDLF

APPENDIX A-1: PUBLIC AND PRIVATE MUNICIPAL SOLID WASTE AND CONSTRUCTION AND DEMOLITION LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

PERMIT #	FACILITY	TONS						FACILITY TYPE
		1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	
5503	LINCOLN COUNTY LANDFILL	40,065	38,481	41,231	44,125	45,558	52,013	MSWLF
3606	GASTON COUNTY C&D LANDFILL	45,837	35,091	39,604	33,799	43,913	50,427	CDLF
8401	ALBEMARLE, CITY OF-LANDFILL	39,920	38,251	40,397	41,494	43,505	49,910	MSWLF
6708	CAMP LEJEUNE MSW LANDFILL	36,652	39,653	47,433	40,054	48,972	49,418	MSWLF
9214	BFI-HOLLY SPRINGS DISPOSAL INC	161,772	25,251	150,523	36,146	37,584	46,975	CDLF
1107	BUNCOMBE COUNTY C&D UNIT	43,147	43,370	24,238	8,209	29,889	39,252	CDLF
8003	ROWAN COUNTY C&D UNIT					12,171	35,070	CDLF
9003	GRIFFIN FARMS CDLF	40,658	24,088	20,763	26,604	32,381	33,639	CDLF
5409	LENOIR COUNTY MSW LANDFILL						33,323	MSWLF
2803	DARE COUNTY C&D LANDFILL	32,495	25,215	24,306	31,038	40,225	32,390	CDLF
9601	WAYNE COUNTY CDLF	38,342	30,838	39,537	31,563	24,481	31,616	CDLF
1302	CABARRUS COUNTY CDLF	26,292	32,294	29,666	31,622	25,570	31,461	CDLF
5101	JOHNSTON COUNTY C&D LANDFILL	33,842	37,728	42,548	38,774	33,853	31,233	CDLF
8401	ALBEMARLE, CITY OF, CDLF	23,903	24,370	28,262	29,362	34,503	30,318	CDLF
2601	CUMBERLAND COUNTY C&D UNIT	21,377	16,314	14,024	13,506	22,901	30,245	CDLF
9226	SHOTWELL LANDFILL INC.		1,902	22,919	21,946	30,094	30,204	CDLF
1803	CATAWBA COUNTY C&D UNIT				27,291	31,920	30,106	CDLF
6301	MOORE COUNTY C&D LANDFILL	31,849	31,144	26,675	24,807	26,237	29,823	CDLF
8807	TRANSYLVANIA COUNTY LANDFILL	18,439	20,186	22,495	24,034	26,496	28,303	MSWLF
5703	MACON COUNTY LANDFILL OPEN	36,844	36,510	37,041	38,145	27,889	27,746	MSWLF
	ALAMANCE COUNTY LANDFILL						25,762	MSWLF
5403	LENOIR COUNTY CDLF	40,664	37,223	39,373	31,680	28,698	25,576	CDLF
3901	GRANVILLE COUNTY CDLF	23,445	22,122	29,599	24,128	24,063	24,579	CDLF
4302	HARNETT COUNTY CDLF	18,472	14,109	16,291	15,766	22,316	24,200	CDLF

APPENDIX A-1: PUBLIC AND PRIVATE MUNICIPAL SOLID WASTE AND CONSTRUCTION AND DEMOLITION LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

PERMIT #	FACILITY	TONS						FACILITY TYPE
		1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	
8301	SCOTLAND COUNTY CDLF	26,785	28,446	24,867	23,613	24,545	23,874	CDLF
9809	WILSON COUNTY WESTSIDE C&D LANDFILL						22,137	CDLF
0501	ASHE COUNTY LANDFILL	19,454	24,833	22,598	22,528	22,342	21,704	MSWLF
8103	RUTHERFORD COUNTY C&D	12,102	14,963	18,291	16,316	24,173	20,604	CDLF
9001	UNION COUNTY C&D	33,670	28,546	31,443	27,498	24,897	20,278	CDLF
7002	PASQUOTANK COUNTY C&D LANDFILL	6,895	6,490	6,753	12,575	21,795	20,129	CDLF
2002	CHEROKEE COUNTY MSW FACILITY	19,470	20,138	19,179	18,977	19,124	18,631	MSWLF
1203	BURKE COUNTY CDLF	13,938	20,712	19,314	14,348	16,633	18,631	CDLF
5503	LINCOLN COUNTY C&D UNIT	6,874	11,404	14,635	18,730	16,337	16,097	CDLF
6801	ORANGE COUNTY C&D UNIT	30,515	33,471	27,729	20,231	17,328	16,084	CDLF
5803	MADISON COUNTY C&D UNIT	3,414	3,421	5,501	3,933	4,180	14,803	CDLF
8602	SURRY COUNTY C&D LANDFILL	16,745	15,951	17,403	13,910	14,814	13,680	CDLF
4501	HENDERSON COUNTY C&D LANDFILL	11,258	11,780	13,082	13,378	17,554	12,628	CDLF
7606	GOLD HILL ROAD C&D DEBRIS LANDFILL			7,471	9,980	15,418	12,401	CDLF
6403	NASH COUNTY C&D LANDFILL			38,963	14,925	17,023	11,928	CDLF
3301	EDGCOMBE COUNTY CDLF	86,968	44,236	18,507	18,639	19,977	11,778	CDLF
7803	ROBESON COUNTY CDLF	7,315	18,990	10,922	10,946	10,431	11,058	CDLF
4303	HARNETT CO ANDERSON CRK C&D LANDFILL	7,872	5,928	7,690	6,751	10,538	10,695	CDLF
2906	DAVIDSON COUNTY CDLF			3,670	8,077	11,707	10,638	CDLF
5704	HIGHLANDS C&D LANDFILL	6,968	7,274	8,962	11,075	9,601	9,463	CDLF
3406	PIEDMONT SANITARY LANDFILL	348,182	292,808	341,056	292,828	195,794	7,930	MSWLF
9801	WILSON COUNTY CDLF	39,785	39,464	37,336	31,249	31,019	7,885	CDLF
5301	LEE COUNTY C&D LANDFILL	9,708	7,987	7,868	8,114	9,247	7,637	CDLF
4407	HAYWOOD COUNTY C&D UNIT					10,116	7,498	CDLF

APPENDIX A-1: PUBLIC AND PRIVATE MUNICIPAL SOLID WASTE AND CONSTRUCTION AND DEMOLITION LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

PERMIT #	FACILITY	TONS						FACILITY TYPE
		1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	
10002	YANCEY-MITCHELL C&D LANDFILL	6,327	3,751	2,809	3,443	4,557	6,519	CDLF
7502	POLK COUNTY C&D LANDFILL				2,347	4,184	5,524	CDLF
0905	BLADEN COUNTY C&D LANDFILL	358	5,635	6,859	4,562	3,861	5,469	CDLF
0104	AUSTIN QUARTER C&D UNIT	8,079	7,324	5,319	4,735	5,866	4,783	CDLF
4204	HALIFAX COUNTY CDLF	5,220	4,588	3,481	4,451	5,724	4,707	CDLF
0503	AVERY COUNTY C&D LANDFILL	3,320	3,478	3,164	2,472	2,830	3,855	CDLF
8202	WI-SAMPSON COUNTY C&D UNIT	103,942	21,618	2,724	9,666	545	3,623	CDLF
5901	MARTIN COUNTY C&D LANDFILL	10,828	3,759	3,572	3,829	4,410	3,567	CDLF
8603	SURRY COUNTY C&D LANDFILL		873	4,308	3,245	2,519	3,448	CDLF
9404	WASHINGTON COUNTY C&D LANDFILL	1,119	764	973	1,116	4,681	2,268	CDLF
4002	GREENE COUNTY CDLF	5,569	4,541	2,446	1,837	1,684	1,627	CDLF
0201	ALEXANDER COUNTY CDLF	4,189	4,000	3,664	4,435	3,566	1,556	CDLF
	NORTHAMPTON CO. C&D STOCKPILE	2,137	708	672	882	1,052	656	CDLF
TOTAL TONS		8,975,950	8,693,089	9,058,936	9,245,807	9,723,722	10,044,705	

APPENDIX A-2: INCINERATION FACILITIES, DESCENDING ORDER OF TONS, FY 2004-2005

		TONS					
PERMIT #	FACILITY	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
6505-I	NEW HANOVER WASTE-TO-ENERGY FACILITY	112,132	108,381	120,751	123,823	74,984	104,755
TOTAL TONS		**112,132**	**108,381**	**120,751**	**123,823**	**74,984**	**104,755**

APPENDIX A-3: PRIVATE INDUSTRIAL LANDFILLS, DESCENDING ORDER OF TONS, FY 2004-2005

		TONS					
PERMIT #	FACILITY	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
7302	CAROLINA POWER	588,129	637,626	587,579	604,673	601,271	424,991
4406	BLUE RIDGE PAPER	252,790	254,825	238,262	248,125	262,223	278,181
9401	WEYERHAEUSER	73,672	69,697	88,631	94,243	107,389	111,463
8503	DUKE POWER/BELE	138,846	204,415	273,667	274,974	97,830	0
5603	COLLINS & AIKMA	2,211	2,988	1,465	4,748	5,292	6,724
9703	LOUISANA-PACIFIC	3,771	2,918	3,289	3,607	4,846	3,135
4204	HALIFAX COAL AS	4,837	5,713	1,303	4,061	2,246	2,362
6004	DUKE POWER COM	1,673	2,187	1,065	2,954	1,621	4,287
7602	EVEREADY BATTE	520	616	676	849	401	538
1804	DUKE POWER/MAR	376,809	231,476	1,497	520	366	685
8805	ECUSTA LANDFILL	6,276	3,791	3,022	293	0	0
8801	ECUSTA ASH LAND	8,870	5,395	472	0	0	0
2502	WEYERHAEUSER	10,472	13,773	16,653	1,494	0	0
2402	INTERNATIONAL P	329,954	423,709	563,087	410,897	0	73,473
2302	CLEVELAND CONT	120,141	101,102	69,954	17,723	0	0
TOTAL TONS		1,918,969	1,960,232	1,850,621	1,669,161	1,083,484	905,838

APPENDIX B: COUNTY POPULATION, WASTE DISPOSAL, PER CAPITA RATE AND PERCENT REDUCTION, FY 2004-2005

COUNTY	POPULATION	MSW TONS MANAGED	MSW TONS DISPOSED				BASE YEAR PER CAPITA	PER CAPITA RATE	%CHANGE FROM 1991-1992
	JULY 2004	1991-1992	2001-2002	2002-2003	2003-2004	2004-2005	1991-1992	2004-2005	2003-2004**
ALAMANCE	137,126	99,302	143,394	144,913	143,358	162,808	0.91	1.18	30%
ALEXANDER	35,140	25,716	25,017	27,834	26,126	25,301	0.90	0.72	-20%
ALLEGHANY	10,847	14,131	8,027	8,249	8,193	8,828	1.45	0.81	-44%
ANSON	25,726	14,229	23,145	29,544	24,796	24,587	0.81	0.96	57%
ASHE	25,104	18,089	22,881	22,587	22,367	22,281	0.81	0.89	10%
AVERY	18,000	11,130	16,673	16,251	18,406	19,396	0.74	1.08	46%
BEAUFORT	45,880	41,796	58,883	67,593	70,868	58,588	0.99	1.28	29%
BERTIE	19,717	17,372	27,614	22,622	36,922	27,036	0.86	1.37	59%
BLADEN	32,996	25,048	37,480	44,554	31,482	30,178	0.86	0.91	6%
BRUNSWICK	85,034	78,123	103,367	120,506	140,371	158,103	1.48	1.86	26%
BUNCOMBE	215,112	159,040	247,830	255,112	319,594	332,217	0.99	1.54	72%
BURKE	88,895	78,006	88,459	81,642	85,273	86,867	1.02	0.98	-4%
CABARRUS	146,628	95,215	203,981	250,162	254,210	286,070	0.94	1.95	108%
CALDWELL	78,548	65,532	86,085	88,730	79,833	91,879	0.92	1.17	27%
CAMDEN	8,525	1,850	3,033	3,630	4,328	3,500	0.31	0.41	32%
CARTERET	61,870	86,894	80,691	88,515	101,592	100,409	1.62	1.62	0%
CASWELL	23,670	5,136	9,486	9,116	9,672	5,380	0.25	0.23	-8%
CATAWBA	147,789	151,559	185,509	192,830	198,758	198,555	1.26	1.34	7%
CHATHAM	55,000	33,235	28,155	40,298	39,984	38,166	0.84	0.69	-17%
CHEROKEE	25,890	16,020	19,108	18,977	19,132	18,679	0.78	0.73	-7%
CHOWAN	14,471	13,892	15,429	16,821	24,102	16,360	0.99	1.27	28%
CLAY	9,618	4,172	4,848	4,792	5,283	5,737	0.57	0.60	5%
CLEVELAND	97,400	73,138	84,793	150,089	120,048	121,404	0.88	1.25	45%
COLUMBUS	54,564	45,199	38,828	32,431	52,358	44,829	0.91	0.82	-10%
CRAVEN	91,980	86,549	87,056	88,270	94,147	100,073	1.05	1.09	4%

APPENDIX B: COUNTY POPULATION, WASTE DISPOSAL, PER CAPITA RATE AND PERCENT REDUCTION, FY 2004-200

COUNTY	POPULATION	MSW TONS MANAGED	MSW TONS DISPOSED				BASE YEAR PER CAPITA	PER CAPITA RATE	%CHANGE FRO 1991-1992
	JULY 2004	1991-1992	2001-2002	2002-2003	2003-2004	2004-2005	1991-1992	2004-2005	2003-2004**
CUMBERLAND	310,850	227,302	403,476	337,375	358,348	510,574	0.81	1.64	103%
CURRITUCK	21,876	13,792	26,943	31,116	43,358	38,295	1.00	1.75	75%
DARE	34,248	51,300	75,809	96,897	127,088	95,513	2.23	2.79	25%
DAVIDSON	153,284	139,617	125,040	139,610	167,005	141,483	1.08	0.92	-14%
DAVIE	37,927	19,348	35,279	37,735	33,983	36,094	0.68	0.95	40%
DUPLIN	51,482	33,310	45,558	43,416	58,243	44,883	0.82	0.87	6%
DURHAM	238,885	218,972	280,680	298,420	294,086	308,097	1.17	1.29	10%
EDGECOMBE	53,916	71,471	89,138	60,805	64,041	53,735	1.25	1.00	-21%
FORSYTH	320,764	304,290	447,508	501,034	550,614	519,272	1.14	1.62	50%
FRANKLIN	52,882	28,702	52,775	47,668	50,129	45,822	0.76	0.87	14%
GASTON	192,044	165,100	214,185	216,267	226,625	232,948	0.93	1.21	30%
GATES	10,986	5,897	5,426	5,250	6,473	5,680	0.63	0.52	-18%
GRAHAM	8,074	4,508	6,845	7,681	6,484	6,581	0.62	0.82	31%
GRANVILLE	52,942	54,548	71,174	68,759	69,579	68,754	1.39	1.30	-7%
GREENE	19,998	7,428	5,677	5,942	6,789	7,775	0.48	0.39	-19%
GUILFORD	434,693	471,541	758,566	709,579	659,224	649,625	1.35	1.49	10%
HALIFAX	56,476	54,907	50,486	53,760	42,186	53,374	0.98	0.95	-4%
HARNETT	99,628	69,073	74,032	73,593	85,390	90,619	1.01	0.91	-10%
HAYWOOD	56,498	57,842	50,438	51,047	55,627	66,387	1.21	1.18	-3%
HENDERSON	98,124	81,498	97,650	104,249	116,840	119,866	1.14	1.25	9%
HERTFORD	23,730	14,288	19,315	21,208	24,984	36,138	0.63	1.52	142%
HOKE	38,626	18,331	22,426	28,027	31,269	28,968	0.80	0.75	-6%
HYDE	5,642	2,762	4,739	4,298	9,874	7,482	0.50	1.33	165%
IREDELL	136,008	114,539	169,987	174,819	191,098	208,138	1.19	1.53	29%
JACKSON	35,629	18,661	38,542	39,230	41,448	48,679	0.68	1.37	101%

APPENDIX B: COUNTY POPULATION, WASTE DISPOSAL, PER CAPITA RATE AND PERCENT REDUCTION, FY 2004-2005

COUNTY	POPULATION	MSW TONS MANAGED	MSW TONS DISPOSED				BASE YEAR PER CAPITA	PER CAPITA RATE	%CHANGE FROM 1991-1992
	JULY 2004	1991-1992	2001-2002	2002-2003	2003-2004	2004-2005	1991-1992	2004-2005	2003-2004**
JOHNSTON	141,391	74,169	159,475	176,576	186,255	157,679	0.88	1.12	27%
JONES	10,241	4,360	2,488	2,725	3,008	2,917	0.47	0.28	-39%
LEE	50,146	48,341	61,739	67,648	67,941	76,971	1.16	1.53	32%
LENOIR	58,548	67,693	99,183	89,576	89,217	80,419	1.17	1.37	17%
LINCOLN	68,070	44,442	82,695	82,930	89,475	100,386	0.87	1.47	70%
MACON	31,769	19,738	32,483	35,825	35,388	37,209	0.82	1.17	43%
MADISON	20,204	11,678	14,883	13,056	13,654	24,338	0.68	1.20	77%
MARTIN	24,702	30,112	18,804	17,458	17,038	20,336	1.19	0.82	-31%
MCDOWELL	43,247	29,180	36,698	38,321	38,065	39,935	0.82	0.92	13%
MECKLENBURG	768,789	677,573	1,279,090	1,278,129	1,280,887	1,285,489	1.29	1.67	30%
MITCHELL	15,992	15,768	17,120	13,885	14,500	16,761	1.11	1.05	30%
MONTGOMERY	27,153	28,873	38,236	45,257	46,175	46,063	1.23	1.70	38%
MOORE	79,342	74,062	89,503	84,819	90,359	95,034	1.23	1.20	-3%
NASH	90,712	84,594	101,051	103,213	114,139	110,941	1.09	1.22	12%
NEW HANOVER	174,313	157,647	241,951	250,327	264,387	279,268	1.28	1.60	25%
NORTHAMPTON	21,566	19,528	10,757	19,271	29,323	15,359	0.94	0.71	-24%
ONSLOW	159,711	158,344	157,279	149,346	181,006	189,905	1.04	1.19	14%
ORANGE	120,985	131,087	98,415	89,547	88,062	90,488	1.36	0.75	-45%
PAMLICO	13,074	8,541	8,060	8,359	12,451	9,035	0.75	0.69	-8%
PASQUOTANK	37,606	30,150	35,131	37,123	39,926	39,099	0.97	1.04	7%
PENDER	45,144	18,188	27,351	29,063	30,586	33,845	0.60	0.75	25%
PERQUIMANS	11,840	7,520	8,348	9,396	15,278	13,065	0.73	1.10	51%
PERSON	36,985	24,249	32,430	35,017	35,014	34,732	0.80	0.94	17%
PITT	141,508	132,898	152,049	152,459	148,664	160,067	1.21	1.13	-7%
POLK	18,966	9,327	10,988	14,001	13,353	15,254	0.63	0.80	28%

APPENDIX B: COUNTY POPULATION, WASTE DISPOSAL, PER CAPITA RATE AND PERCENT REDUCTION, FY 2004-200

COUNTY	POPULATION	MSW TONS MANAGED	MSW TONS DISPOSED				BASE YEAR PER CAPITA	PER CAPITA RATE	%CHANGE FRC 1991-1992
	JULY 2004	1991-1992	2001-2002	2002-2003	2003-2004	2004-2005	1991-1992	2004-2005	2003-2004**
RANDOLPH	135,805	78,663	115,987	120,390	127,782	124,035	0.73	0.91	25%
RICHMOND	46,452	60,752	55,651	64,246	76,304	92,606	1.35	1.99	48%
ROBESON	126,554	104,700	117,386	126,032	129,897	117,788	0.99	0.93	-6%
ROCKINGHAM	92,118	71,481	94,982	100,478	97,642	98,556	0.83	1.07	29%
ROWAN	133,134	90,081	139,818	135,552	131,386	147,880	0.80	1.11	39%
RUTHERFORD	63,220	89,175	65,080	63,608	72,756	71,101	1.56	1.12	-28%
SAMPSON	62,630	33,545	47,453	52,657	54,907	50,182	0.70	0.80	14%
SCOTLAND	36,864	39,867	36,428	42,092	45,112	45,618	1.17	1.24	6%
STANLY	59,078	69,288	73,494	74,341	83,181	83,933	1.32	1.42	8%
STOKES	45,887	17,976	15,657	16,223	15,656	11,259	0.47	0.25	-48%
SURRY	72,276	73,595	71,956	68,830	83,583	90,567	1.18	1.25	6%
SWAIN	13,470	5,651	9,132	8,286	9,343	8,413	0.50	0.62	25%
TRANSYLVANIA	29,714	30,072	29,180	30,539	32,343	37,794	1.16	1.27	10%
TYRRELL	4,174	2,985	2,361	3,021	2,023	2,699	0.79	0.65	-18%
UNION	151,847	77,842	165,366	166,558	166,124	168,381	0.90	1.11	23%
VANCE	43,829	43,267	56,260	52,119	50,799	53,895	1.11	1.23	11%
WAKE	723,708	569,622	880,136	856,043	915,086	999,535	1.29	1.38	7%
WARREN	20,074	10,978	8,685	10,996	13,856	3,124	0.83	0.16	-75%
WASHINGTON	13,480	11,699	13,346	12,692	18,230	16,976	0.84	1.26	50%
WATAUGA	42,854	36,755	49,014	50,099	53,111	65,132	0.99	1.52	54%
WAYNE	115,110	108,149	133,568	124,473	122,620	127,369	1.00	1.11	11%
WILKES	66,982	58,818	60,671	60,189	61,686	61,649	0.97	0.92	-5%
WILSON	76,414	120,870	133,235	138,807	123,498	127,231	1.82	1.67	-8%
YADKIN	37,054	20,779	19,767	20,212	22,651	21,532	0.67	0.58	-13%
YANCEY	18,071	15,576	11,718	11,912	12,356	13,929	1.01	0.77	-59%

APPENDIX B: COUNTY POPULATION, WASTE DISPOSAL, PER CAPITA RATE AND PERCENT REDUCTION, FY 2004-2005

COUNTY	POPULATION	MSW TONS MANAGED	MSW TONS DISPOSED				BASE YEAR PER CAPITA	PER CAPITA RATE	%CHANGE FROM 1991-1992
	JULY 2004	1991-1992	2001-2002	2002-2003	2003-2004	2004-2005	1991-1992	2004-2005	2003-2004**
STATE TOTALS	8,541,263	7,257,428	9,999,284	10,236,960	10,713,444	11,029,485	1.07	1.29	21%

TOTAL ADJUSTED FOR HURRICANE DEBRIS (e.g. FRAN, FLOYD)

*** Percent Change formula: (current year per capita minus base year per capita) divided by base year per capita*

Appendix C
Imports and Exports
FY 1995-1996 through FY 2004-2005

Fiscal Year	Total Tons Exported	Receiving Facility	Distribution of Tons Received	Total Tons Imported	Receiving Facility	Distribution of Tons Received
2004-2005	**1,161,926**[4]	Atlantic Waste, VA	44,864	**119,202**[4]	Chambers Development Landfill	82,535
		BFI- Carter Valley, TN	9,500		Gaston County Landfill	75
		Bristol Landfill, VA	14,314		Griffin Farms C&D Landfill	373
		Brunswick Landfill, VA	370,810		Mecklenburg County Landfill	584
		Eagle Point Landfill, GA	8,398		Piedmont Sanitary Landfill	1,754
		Fort Mill Transfer, SC[4]	52,731		Upper Piedmont Regional Landfill	30,163
		Iris Glenn Landfill, TN	53,126		Waste Management of the Carolinas Transfer	3,230
		Maplewood Landfill, VA	364			
		Palmetto Landfill, SC	507,307			
		Pinebluff Landfill, GA	14,414			
		R&B Landfill, GA	34,748			
		Union County, SC	51,338			
2003-2004	**1,048,111**[3]	Atlantic Waste Disposal, VA	53,898	**108,803**[3]	Charlotte Motor Speedway Landfill[3]	3,567
		Carter Valley, TN	9,356		Lake Norman Landfill	6,452
		Bristol Landfill, VA	13,768		Chambers Development Landfill	61,301
		Brunswick Landfill, VA	377,250		Gaston County Landfill	106
		Eagle Point Landfill,	3,046		Griffin Farms C&D Landfill	197
		Iris Glenn Landfill, TN	45,686		Mecklenburg County Landfill	855
		Lee County Landfill, SC	10,608		New Hanover Waste to Energy	3
		Maplewood Landfill, VA	1,321		Upper Piedmont Landfill	33,733
		Palmetto Landfill, SC	479,650		Waste Management of the Carolinas Transfer	2,589
		Pinebluff Landfill, GA	12,788			
		R&B Landfill	22,216			
		Hampton Roads,VA	4,072			
		Union County Landfill, SC	14,453			
		Fort Mill Transfer Station,SC[3]	96,000			
2002-2003	**971,286**[2]	Maplewood Landfill, VA	10,887	**133,145**[2]	BFI- Charlotte Motor Speedway[2]	66,246
		Atlantic Waste, VA	61,912		Chambers Development, Anson Co.[2]	91,990
		BFI, Carter Valley, TN	8,746		Gaston Co. Landfill	127
		Bristol Landfill, VA	13,000		Griffin Farms C&D Landfill, Union Co.	201
		Brunswick Landfill, VA	396,386		Mecklenburg Co. Landfill	1,181
		Iris Glenn Landfill, TN	41,384		New Hanover Waste to Energy	1
		Lee Co. Landfill, SC	31,084		Piedmont Sanitary Landfill, Forsyth Co.	37,264
		Palmetto Landfill, SC	395,418		Upper Piedmont Regional Landfill,	10,949
		Pinebluff Landfill, GA	9,839		Person Co	2,403
		R&B Landfill, GA	2,030		Waste Management of Carolinas,	
		John C. Holland Enterprises	600		Gaston Co.	

2000-2001	**900,743**	Brunswick Landfill, VA Palmetto Landfill, SC Iris Glenn Landfill, TN Atlantic Waste, VA Maplewood Landfill, VA Bristol Landfill, VA Lee Co. Landfill, SC Pinebluff Landfill, GA R & B Landfill, GA	436,264 340,782 44,863 30,275 18,541 13,121 9,912 6,809 176		**21,614**	Chambers Development Landfill, Anson Co. Waste Management, Gaston Co. (transfer) Addington Upper Piedmont Landfill, Person Co Mecklenburg Co. Landfill (CDLF) Gaston Co. Landfill Griffin Farms C&D Landfill, Union Co. GDS Recycling Services, Catawba Co. Uwharrie Env. MRF, Montgomery Co.	10,328 4,659 2,417 2,407 664 639 441 59
1999-2000	**1,106,897**	Palmetto Landfill, SC Brunswick Landfill, VA Lee Co. Landfill, SC Iris Glenn Landfill, TN Bristol Landfill, VA Pinebluff Landfill, GA	463,587 432,645 148,412 43,680 14,001 4,572		**41,840**	Addington Upper Piedmont Landfill, Person Co. Piedmont Sanitary Landfill, Forsyth Co. Gaston Co. Landfill Griffin Farms C&D Landfill, Union Co. GDS Recycling Services, Catawba Co. Uwharrie Env. MRF, Montgomery Co Mecklenburg Co. Landfill Uwharrie Env. Landfill, Montgomery Co.	32,976 (VA) 7,158 (VA) 640 (SC) 565 (SC) 377 (SC) 101 (SC) 15 (SC) 8 (SC)
1998-1999	**1,166,875**	Palmetto Landfill, SC Brunswick Landfill, VA Lee Co. Landfill, SC Iris Glenn Landfill, TN Bristol Landfill, VA Pinebluff Landfill, GA	446,858 382,479 277,246 41,612 14,766 3,914		**74,185**	Addington Upper Piedmont Landfill, Person Co. Piedmont Sanitary Landfill, Forsyth Co. Griffin Farms C&D, Union Co. Gaston Co. Landfill Uwharrie Env. MRF, Montgomery Co. New Hanover Waste to Energy	53,798 (VA) 19,251 (VA) 594 (SC) 418 (SC) 67 (SC) 57 (MD)
1997-1998	**629,415**	Palmetto Landfill, SC Brunswick Landfill, VA Lee Co. Landfill, SC	422,248 190,890 16,277		**87,393**	Piedmont Sanitary Landfill, Forsyth Co. Addington Upper Piedmont Landfill, Person Co. Union Co. Landfill	80,570 (VA) 6,194 (VA) 629 (SC)
1996-1997	**280,400**	Palmetto Landfill, SC	280,400		**103,510**	Piedmont Sanitary Landfill, Forsyth Co. Union County Landfill	103,120 (VA) 390 (SC)
1995-1996	**111,097**	Palmetto Landfill, SC	111,097		**88,982**	Piedmont Sanitary Landfill, Forsyth Co.	88,982 (VA)

1) This does not include 73,911 tons from Mecklenburg County that were exported to the Fort Mill Transfer Station in South Carolina and then imported to a landfill in North Carolina.

2) This does not including 77,217 tons from Mecklenburg County that was exported to the Fort Mill Transfer Station in South Carolina and imported back to landfills in North Carolina.

3) This does not include 96,001 tons exported to the Fort Mill Transfer Station in SC and then imported back to the Charlotte Motor Speedway Landfill.

4) This does not include 99,065 tons of Municipal Solid Waste from Mecklenburg County that was exported to the Fort Mill Transfer Station in South Carolina and then imported back into North Carolina to the BFI- Charlotte Motor Speedway Landfill. The Total also does not include an additional 16,847 tons of construction and demolition material from Mecklenburg County sent to the Fort Mill Transfer Station and imported back to North Carolina to the BFI- Lake Norman Construction and Demolition Landfill.

Total Landfill Capacity for North Carolina

County:	All Counties		
	Opened	**Surveyed**	**Years Open**
Date	Varied	9/21/2005	9.2
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	59,549,524.6	6,479,185.5	7,673,315.7
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	99,333,552.9	137,211,772.0	350,186,543.0
Remaining Airspace (yd3)		37,878,219.1	250,852,990.1
Utilization Factor (tons/yd3):	0.60		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		22,707,633.8	150,383,992.7
Remaining Capacity in Years (Avg. TPY)		3.5	23.2
Remaining Capacity in Years (2004-2005 TPY)		3.0	19.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Albermarle, City of

County: Stanly

	Opened	Surveyed	Years Open
Date	5/20/1999	6/15/2005	6.1

	Total	Avg. Per Year	2004-2005
Tons Disposed	255,681.0	42,104.4	49,909.5

	Used	Permitted	Total
Volume Airspace (yd3)	434,348.0	683,555.0	4,970,844.0
Remaining Airspace (yd3)		249,207.0	4,536,496.0

Utilization Factor (tons/yd3): 0.59

	Permitted	Total
Remaining Capacity for Tons of Waste	146,696.9	2,670,429.8
Remaining Capacity in Years (Avg. TPY)	3.5	63.4
Remaining Capacity in Years (2004-2005 TPY)	2.9	53.5

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Ashe County Landfill

County:	Ashe

	Opened	Surveyed	Years Open
Date	11/1/1993	6/6/2005	11.6

	Total	Avg. Per Year	2004-2005
Tons Disposed	188,689.8	16,273.7	21,704.2

	Used	Permitted	Total
Volume Airspace (yd3)	393,455.0	427,000.0	2,340,000.0
Remaining Airspace (yd3)		33,545.0	1,946,545.0

Utilization Factor (tons/yd3):	0.48

	Permitted	Total
Remaining Capacity for Tons of Waste	16,087.2	933,507.3
Remaining Capacity in Years (Avg. TPY)	1.0	57.4
Remaining Capacity in Years (2004-2005 TPY)	0.7	43.0

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Austin Quarter SWM Facility

County:	Alamance

	Opened	Surveyed	Years Open
Date	3/18/1994	1/10/2005	10.8

	Total	Avg. Per Year	2004-2005
Tons Disposed	882,641.0	81,595.7	82,684.5

	Used	Permitted	Total
Volume Airspace (yd3)	1,358,590.0	1,492,281.0	10,000,000.0
Remaining Airspace (yd3)		133,691.0	8,641,410.0

Utilization Factor (tons/yd3):	0.65

	Permitted	Total
Remaining Capacity for Tons of Waste	86,855.6	5,614,101.9
Remaining Capacity in Years (Avg. TPY)	1.1	68.8
Remaining Capacity in Years (2004-2005 TPY)	1.1	67.9

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

BFI - Charlotte Motor Speedway Landfill

County:	Cabarrus		
	Opened	**Surveyed**	**Years Open**
Date	3/6/1992	2/17/2005	13.0
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	11,468,632.0	885,419.1	1,230,002.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	20,335,000.0	24,495,035.0	24,495,035.0
Remaining Airspace (yd3)		4,160,035.0	4,160,035.0
Utilization Factor (tons/yd3):	0.56		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		2,346,196.7	2,346,196.7
Remaining Capacity in Years (Avg. TPY)		2.6	2.6
Remaining Capacity in Years (2004-2005 TPY)		1.9	1.9

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Buncombe County MSW Landfill

County:	Buncombe

	Opened	Surveyed	Years Open
Date	9/29/1997	6/30/2005	7.8

	Total	Avg. Per Year	2004-2005
Tons Disposed	1,110,493.0	143,273.6	173,773.8

	Used	Permitted	Total
Volume Airspace (yd3)	2,093,000.0	3,255,999.0	6,803,056.0
Remaining Airspace (yd3)		1,162,999.0	4,710,056.0

Utilization Factor (tons/yd3):	0.53

	Permitted	Total
Remaining Capacity for Tons of Waste	617,057.9	2,499,036.9
Remaining Capacity in Years (Avg. TPY)	4.3	17.4
Remaining Capacity in Years (2004-2005 TPY)	3.6	14.4

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Camp Lejeune Marine Corps Base

County:	Onslow		
	Opened	**Surveyed**	**Years Open**
Date	1/1/1998	7/15/2004	6.5
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	293,073.1	44,845.0	49,418.4
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	786,440.0	1,331,000.0	4,089,000.0
Remaining Airspace (yd3)		544,560.0	3,302,560.0
Utilization Factor (tons/yd3):	0.37		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		202,934.6	1,230,725.2
Remaining Capacity in Years (Avg. TPY)		4.5	27.4
Remaining Capacity in Years (2004-2005 TPY)		4.1	24.9

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Catawba County Landfill

County:	Catawba		
	Opened	**Surveyed**	**Years Open**
Date	1/1/1998	5/3/2005	7.3
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,230,020.9	167,698.8	168,140.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	2,433,309.0	4,515,000.0	4,515,000.0
Remaining Airspace (yd3)		2,081,691.0	2,081,691.0
Utilization Factor (tons/yd3):	0.51		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		1,052,280.4	1,052,280.4
Remaining Capacity in Years (Avg. TPY)		6.3	6.3
Remaining Capacity in Years (2004-2005 TPY)		6.3	6.3

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Chambers Development
MSWLF

County:	Anson

	Opened	Surveyed	Years Open
Date	12/12/2000	2/12/2005	4.2

	Total	Avg. Per Year	2004-2005
Tons Disposed	1,039,097.0	249,199.1	288,249.0

	Used	Permitted	Total
Volume Airspace (yd3)	1,423,918.0	3,300,000.0	19,310,000.0
Remaining Airspace (yd3)		1,876,082.0	17,886,082.0

Utilization Factor (tons/yd3):	0.73

	Permitted	Total
Remaining Capacity for Tons of Waste	1,369,061.4	13,052,278.4
Remaining Capacity in Years (Avg. TPY)	5.5	52.4
Remaining Capacity in Years (2004-2005 TPY)	4.7	45.3

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Cherokee County MSW Facility

County:	Cherokee		
	Opened	**Surveyed**	**Years Open**
Date	1/9/1998	6/13/2005	7.4
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	140,608.0	18,937.0	18,631.2
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	274,528.0	465,479.0	1,127,940.0
Remaining Airspace (yd3)		190,951.0	853,412.0
Utilization Factor (tons/yd3):	0.51		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		97,801.5	437,101.3
Remaining Capacity in Years (Avg. TPY)		5.2	23.1
Remaining Capacity in Years (2004-2005 TPY)		5.2	23.5

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Cleveland County Landfill

County:	Cleveland

	Opened	Surveyed	Years Open
Date	7/27/1998	6/15/2005	6.9

	Total	Avg. Per Year	2004-2005
Tons Disposed	545,877.0	79,277.0	94,667.0

	Used	Permitted	Total
Volume Airspace (yd3)	1,075,518.0	1,613,364.0	1,613,364.0
Remaining Airspace (yd3)		537,846.0	537,846.0

Utilization Factor (tons/yd3):	0.51

	Permitted	Total
Remaining Capacity for Tons of Waste	272,982.7	272,982.7
Remaining Capacity in Years (Avg. TPY)	3.4	3.4
Remaining Capacity in Years (2004-2005 TPY)	2.9	2.9

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

CRSWMA Landfill

County:	Craven		
	Opened	**Surveyed**	**Years Open**
Date	10/9/1993	7/1/2005	11.7
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,815,051.0	154,785.8	211,126.6
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	2,323,230.0	2,614,777.0	15,500,000.0
Remaining Airspace (yd3)		291,547.0	13,176,770.0
Utilization Factor (tons/yd3):	0.78		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		227,774.6	10,294,507.9
Remaining Capacity in Years (Avg. TPY)		1.5	66.5
Remaining Capacity in Years (2004-2005 TPY)		1.1	48.8

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Cumberland County Landfill

County:	Cumberland		
	Opened	**Surveyed**	**Years Open**
Date	12/17/1997	4/18/2005	7.3
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,026,420.0	139,940.2	173,797.2
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,776,965.0	2,350,400.0	5,782,175.0
Remaining Airspace (yd3)		573,435.0	4,005,210.0
Utilization Factor (tons/yd3):	0.58		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		331,230.6	2,313,510.8
Remaining Capacity in Years (Avg. TPY)		2.4	16.5
Remaining Capacity in Years (2004-2005 TPY)		1.9	13.3

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Davidson County MSW Lined Landfill

County:	Davidson

	Opened	Surveyed	Years Open
Date	10/1/1994	4/5/2005	10.5

	Total	Avg. Per Year	2004-2005
Tons Disposed	997,898.0	94,942.0	104,040.0

	Used	Permitted	Total
Volume Airspace (yd3)	1,901,772.0	2,425,000.0	2,425,000.0
Remaining Airspace (yd3)		523,228.0	523,228.0

Utilization Factor (tons/yd3):	0.52

	Permitted	Total
Remaining Capacity for Tons of Waste	274,548.3	274,548.3
Remaining Capacity in Years (Avg. TPY)	2.9	2.9
Remaining Capacity in Years (2004-2005 TPY)	2.6	2.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

East Carolina Regional Landfill

County:	Bertie

	Opened	Surveyed	Years Open
Date	8/6/1993	3/2/2005	11.6

	Total	Avg. Per Year	2004-2005
Tons Disposed	4,637,888.9	400,849.3	507,877.0

	Used	Permitted	Total
Volume Airspace (yd3)	6,598,391.0	8,267,000.0	24,200,000.0
Remaining Airspace (yd3)		1,668,609.0	17,601,609.0

Utilization Factor (tons/yd3):	0.70

	Permitted	Total
Remaining Capacity for Tons of Waste	1,172,834.9	12,371,850.6
Remaining Capacity in Years (Avg. TPY)	2.9	30.9
Remaining Capacity in Years (2004-2005 TPY)	2.3	24.4

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Foothills Environmental Landfill

County:	Caldwell

	Opened	Surveyed	Years Open
Date	8/26/1998	3/9/2005	6.5

	Total	Avg. Per Year	2004-2005
Tons Disposed	811,120.8	124,114.7	203,788.0

	Used	Permitted	Total
Volume Airspace (yd3)	2,069,854.0	2,800,000.0	9,680,000.0
Remaining Airspace (yd3)		730,146.0	7,610,146.0

Utilization Factor (tons/yd3):	0.39

	Permitted	Total
Remaining Capacity for Tons of Waste	286,124.8	2,982,214.2
Remaining Capacity in Years (Avg. TPY)	2.3	24.0
Remaining Capacity in Years (2004-2005 TPY)	1.4	14.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Gaston County Landfill

County:	Gaston		
	Opened	**Surveyed**	**Years Open**
Date	7/1/1997	7/26/2005	8.1
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	659,150.3	81,694.8	70,905.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,226,496.0	1,428,000.0	7,441,200.0
Remaining Airspace (yd3)		201,504.0	6,214,704.0
Utilization Factor (tons/yd3):	0.54		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		108,293.4	3,339,940.7
Remaining Capacity in Years (Avg. TPY)		1.3	40.9
Remaining Capacity in Years (2004-2005 TPY)		1.5	47.1

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Greensboro, City of

County:	Guilford		
	Opened	**Surveyed**	**Years Open**
Date	12/9/1997	4/21/2005	7.4
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,869,521.0	253,844.8	219,089.7
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	2,960,316.0	5,113,682.0	5,113,682.0
Remaining Airspace (yd3)		2,153,366.0	2,153,366.0
Utilization Factor (tons/yd3):	0.63		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		1,359,909.9	1,359,909.9
Remaining Capacity in Years (Avg. TPY)		5.4	5.4
Remaining Capacity in Years (2004-2005 TPY)		6.2	6.2

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Hanes Mill Road Landfill

County:	Forsyth

	Opened	Surveyed	Years Open
Date	4/7/1997	1/31/2005	7.8

	Total	Avg. Per Year	2004-2005
Tons Disposed	2,273,903.0	290,607.0	274,560.9

	Used	Permitted	Total
Volume Airspace (yd3)	3,496,000.0	5,170,216.0	16,446,816.0
Remaining Airspace (yd3)		1,674,216.0	12,950,816.0

Utilization Factor (tons/yd3):	0.65

	Permitted	Total
Remaining Capacity for Tons of Waste	1,088,960.0	8,423,598.0
Remaining Capacity in Years (Avg. TPY)	3.7	29.0
Remaining Capacity in Years (2004-2005 TPY)	4.0	30.7

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Haywood County White Oak Landfill

County:	Haywood

	Opened	Surveyed	Years Open
Date	10/15/1993	6/14/2005	11.7

	Total	Avg. Per Year	2004-2005
Tons Disposed	509,634.0	43,695.7	56,055.2

	Used	Permitted	Total
Volume Airspace (yd3)	1,086,835.0	1,819,337.0	8,335,231.0
Remaining Airspace (yd3)		732,502.0	7,248,396.0

Utilization Factor (tons/yd3):	0.47

	Permitted	Total
Remaining Capacity for Tons of Waste	343,481.7	3,398,886.7
Remaining Capacity in Years (Avg. TPY)	7.9	77.8
Remaining Capacity in Years (2004-2005 TPY)	6.1	60.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

High Point City of - Landfill

County:	Guilford		
	Opened	**Surveyed**	**Years Open**
Date	10/1/1993	5/16/2005	11.6
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,439,282.0	123,839.3	99,207.4
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	2,548,701.0	3,442,281.0	3,442,281.0
Remaining Airspace (yd3)		893,580.0	893,580.0
Utilization Factor (tons/yd3):	0.56		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		504,615.3	504,615.3
Remaining Capacity in Years (Avg. TPY)		4.1	4.1
Remaining Capacity in Years (2004-2005 TPY)		5.1	5.1

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Iredell County Sanitary Landfill

County:	Iredell

	Opened	Surveyed	Years Open
Date	10/8/1993	6/8/2005	11.7

	Total	Avg. Per Year	2004-2005
Tons Disposed	1,445,063.0	123,869.8	149,417.0

	Used	Permitted	Total
Volume Airspace (yd3)	2,718,960.0	3,863,570.0	6,661,380.0
Remaining Airspace (yd3)		1,144,610.0	3,942,420.0

Utilization Factor (tons/yd3):	0.53

	Permitted	Total
Remaining Capacity for Tons of Waste	608,333.2	2,095,303.1
Remaining Capacity in Years (Avg. TPY)	4.9	16.9
Remaining Capacity in Years (2004-2005 TPY)	4.1	14.0

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Johnston County Landfill

County:	Johnston

	Opened	Surveyed	Years Open
Date	10/1/1997	3/21/2005	7.5

	Total	Avg. Per Year	2004-2005
Tons Disposed	742,559.0	99,420.7	108,751.0

	Used	Permitted	Total
Volume Airspace (yd3)	1,608,985.0	1,933,819.0	6,347,780.0
Remaining Airspace (yd3)		324,834.0	4,738,795.0

Utilization Factor (tons/yd3):	0.46

	Permitted	Total
Remaining Capacity for Tons of Waste	149,913.4	2,186,990.5
Remaining Capacity in Years (Avg. TPY)	1.5	22.0
Remaining Capacity in Years (2004-2005 TPY)	1.4	20.1

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Lenoir County Landfill

County:	Lenoir		
	Opened	**Surveyed**	**Years Open**
Date	7/1/2004	6/9/2005	0.9
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	35,313.0	37,603.7	33,323.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	82,690.0	635,000.0	3,000,000.0
Remaining Airspace (yd3)		552,310.0	2,917,310.0
Utilization Factor (tons/yd3):	0.43		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		235,865.6	1,245,845.5
Remaining Capacity in Years (Avg. TPY)		6.3	33.1
Remaining Capacity in Years (2004-2005 TPY)		7.1	37.4

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Lincoln County Landfill

County:	Lincoln		
	Opened	**Surveyed**	**Years Open**
Date	10/4/1993	3/25/2005	11.5
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	484,146.7	42,204.0	52,012.8
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,166,201.0	1,270,000.0	4,889,800.0
Remaining Airspace (yd3)		103,799.0	3,723,599.0
Utilization Factor (tons/yd3):	0.42		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		43,092.0	1,545,846.8
Remaining Capacity in Years (Avg. TPY)		1.0	36.6
Remaining Capacity in Years (2004-2005 TPY)		0.8	29.7

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Macon County Landfill

County:	Macon		
	Opened	**Surveyed**	**Years Open**
Date	5/1/1992	6/28/2005	13.2
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	360,786.0	27,419.3	27,134.2
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	718,819.0	1,279,949.0	2,723,049.0
Remaining Airspace (yd3)		561,130.0	2,004,230.0
Utilization Factor (tons/yd3):	0.50		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		281,639.5	1,005,953.0
Remaining Capacity in Years (Avg. TPY)		10.3	36.7
Remaining Capacity in Years (2004-2005 TPY)		10.4	37.1

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Mecklenberg County Landfill

County: Mecklenberg

	Opened	Surveyed	Years Open
Date	4/11/2000	3/4/2005	4.9

	Total	Avg. Per Year	2004-2005
Tons Disposed	534,398.0	109,166.0	140,347.5

	Used	Permitted	Total
Volume Airspace (yd3)	921,655.0	2,400,000.0	14,000,000.0
Remaining Airspace (yd3)		1,478,345.0	13,078,345.0

Utilization Factor (tons/yd3): 0.58

	Permitted	Total
Remaining Capacity for Tons of Waste	857,180.4	7,583,142.7
Remaining Capacity in Years (Avg. TPY)	7.9	69.5
Remaining Capacity in Years (2004-2005 TPY)	6.1	54.0

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

New Hanover County Landfill

County:	New Hanover		
	Opened	**Surveyed**	**Years Open**
Date	8/24/1981	8/22/2005	24.0
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	3,420,365.0	142,547.7	175,425.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	4,601,633.0	4,740,020.0	5,666,734.0
Remaining Airspace (yd3)		138,387.0	1,065,101.0
Utilization Factor (tons/yd3):	0.74		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		102,862.2	791,682.9
Remaining Capacity in Years (Avg. TPY)		0.7	5.6
Remaining Capacity in Years (2004-2005 TPY)		0.6	4.5

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Onslow County Subtitle D Landfill

County:	Onslow		
	Opened	**Surveyed**	**Years Open**
Date	1/1/1998	5/17/2005	7.4
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	824,873.0	111,877.0	131,685.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,380,979.0	1,658,328.0	5,712,666.0
Remaining Airspace (yd3)		277,349.0	4,331,687.0
Utilization Factor (tons/yd3):	0.60		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		165,663.4	2,587,361.3
Remaining Capacity in Years (Avg. TPY)		1.5	23.1
Remaining Capacity in Years (2004-2005 TPY)		1.3	19.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Orange County Landfill

County:	Orange		
	Opened	**Surveyed**	**Years Open**
Date	7/1/1995	6/15/2005	10.0
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	578,517.0	58,098.2	56,307.7
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,050,000.0	1,604,000.0	1,604,000.0
Remaining Airspace (yd3)		554,000.0	554,000.0
Utilization Factor (tons/yd3):	0.55		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		305,236.6	305,236.6
Remaining Capacity in Years (Avg. TPY)		5.3	5.3
Remaining Capacity in Years (2004-2005 TPY)		5.4	5.4

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Robeson County Landfill

County:	Robeson		
	Opened	**Surveyed**	**Years Open**
Date	1/1/1998	6/16/2005	7.5
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	708,466.0	95,030.2	95,584.8
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,180,074.0	2,000,000.0	6,000,000.0
Remaining Airspace (yd3)		819,926.0	4,819,926.0
Utilization Factor (tons/yd3):	0.60		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		492,248.5	2,893,677.6
Remaining Capacity in Years (Avg. TPY)		5.2	30.5
Remaining Capacity in Years (2004-2005 TPY)		5.1	30.3

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Rockingham County Landfill

County: Rockingham

	Opened	Surveyed	Years Open
Date	5/5/1995	3/9/2005	9.8

	Total	Avg. Per Year	2004-2005
Tons Disposed	738,899.0	75,050.9	89,388.0

	Used	Permitted	Total
Volume Airspace (yd3)	1,469,616.0	1,865,268.0	5,870,000.0
Remaining Airspace (yd3)		395,652.0	4,400,384.0

Utilization Factor (tons/yd3): 0.50

	Permitted	Total
Remaining Capacity for Tons of Waste	198,927.4	2,212,441.4
Remaining Capacity in Years (Avg. TPY)	2.7	29.5
Remaining Capacity in Years (2004-2005 TPY)	2.2	24.8

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Rowan County Landfill

County:	Rowan		
	Opened	**Surveyed**	**Years Open**
Date	12/1/1989	6/15/2005	15.5
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	1,122,570.0	72,250.0	75,523.6
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	2,121,847.0	3,451,834.0	15,071,000.0
Remaining Airspace (yd3)		1,329,987.0	12,949,153.0
Utilization Factor (tons/yd3):	0.53		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		703,633.9	6,850,791.2
Remaining Capacity in Years (Avg. TPY)		9.7	94.8
Remaining Capacity in Years (2004-2005 TPY)		9.3	90.7

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Surry County MSWLF

County:	Surry		
	Opened	**Surveyed**	**Years Open**
Date	12/1/1998	6/7/2005	6.5
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	412,121.0	63,246.7	69,190.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	765,754.0	1,301,000.0	5,212,000.0
Remaining Airspace (yd3)		535,246.0	4,446,246.0
Utilization Factor (tons/yd3):	0.54		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		288,063.9	2,392,924.3
Remaining Capacity in Years (Avg. TPY)		4.6	37.8
Remaining Capacity in Years (2004-2005 TPY)		4.2	34.6

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Transylvania County Landfill

County:	Transylvania

	Opened	Surveyed	Years Open
Date	6/13/1990	8/5/2005	15.1

	Total	Avg. Per Year	2004-2005
Tons Disposed	265,196.0	17,509.6	28,302.6

	Used	Permitted	Total
Volume Airspace (yd3)	397,689.0	522,000.0	522,000.0
Remaining Airspace (yd3)		124,311.0	124,311.0

Utilization Factor (tons/yd3):	0.67

	Permitted	Total
Remaining Capacity for Tons of Waste	82,895.9	82,895.9
Remaining Capacity in Years (Avg. TPY)	4.7	4.7
Remaining Capacity in Years (2004-2005 TPY)	2.9	2.9

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Upper Piedmont Regional Landfill

County: Person

	Opened	Surveyed	Years Open
Date	7/30/1997	3/2/2005	7.6

	Total	Avg. Per Year	2004-2005
Tons Disposed	1,668,867.0	219,896.7	238,823.0

	Used	Permitted	Total
Volume Airspace (yd3)	2,697,418.0	4,600,000.0	8,500,000.0
Remaining Airspace (yd3)		1,902,582.0	5,802,582.0

Utilization Factor (tons/yd3): 0.62

	Permitted	Total
Remaining Capacity for Tons of Waste	1,177,109.5	3,590,002.6
Remaining Capacity in Years (Avg. TPY)	5.4	16.3
Remaining Capacity in Years (2004-2005 TPY)	4.9	15.0

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
    Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
    Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Uwharrie Environmental Landfill

County:	Montgomery		
	Opened	**Surveyed**	**Years Open**
Date	12/12/1995	3/2/2005	9.2
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	4,647,092.0	503,963.9	729,158.0
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	7,316,670.0	7,889,000.0	14,402,000.0
Remaining Airspace (yd3)		572,330.0	7,085,330.0
Utilization Factor (tons/yd3):	0.64		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		363,508.3	4,500,159.3
Remaining Capacity in Years (Avg. TPY)		0.7	8.9
Remaining Capacity in Years (2004-2005 TPY)		0.5	6.2

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Wake County Landfill - North

County:	Wake

	Opened	Surveyed	Years Open
Date	7/1/1998	7/2/2005	7.0

	Total	Avg. Per Year	2004-2005
Tons Disposed	3,635,119.5	519,049.0	371,634.7

	Used	Permitted	Total
Volume Airspace (yd3)	5,945,776.9	7,900,000.0	7,900,000.0
Remaining Airspace (yd3)		1,954,223.1	1,954,223.1

Utilization Factor (tons/yd3):	0.61

	Permitted	Total
Remaining Capacity for Tons of Waste	1,194,769.8	1,194,769.8
Remaining Capacity in Years (Avg. TPY)	2.3	2.3
Remaining Capacity in Years (2004-2005 TPY)	3.2	3.2

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Wayne County Landfill

County:	Wayne

	Opened	Surveyed	Years Open
Date	1/26/1998	1/15/2005	7.0

	Total	Avg. Per Year	2004-2005
Tons Disposed	596,311.0	85,547.0	92,938.4

	Used	Permitted	Total
Volume Airspace (yd3)	1,013,841.0	2,082,000.0	5,000,001.0
Remaining Airspace (yd3)		1,068,159.0	3,986,160.0

Utilization Factor (tons/yd3):	0.59

	Permitted	Total
Remaining Capacity for Tons of Waste	628,259.2	2,344,540.3
Remaining Capacity in Years (Avg. TPY)	7.3	27.4
Remaining Capacity in Years (2004-2005 TPY)	6.8	25.2

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
  Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
  Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Wilkes County MSWLF

County:	Wilkes		
	Opened	**Surveyed**	**Years Open**
Date	10/7/1993	3/9/2005	11.4
	Total	**Avg. Per Year**	**2004-2005**
Tons Disposed	605,704.6	53,040.9	61,648.9
	Used	**Permitted**	**Total**
Volume Airspace (yd3)	1,288,145.0	1,406,578.0	3,473,509.0
Remaining Airspace (yd3)		118,433.0	2,185,364.0
Utilization Factor (tons/yd3):	0.47		
		Permitted	**Total**
Remaining Capacity for Tons of Waste		55,688.9	1,027,590.1
Remaining Capacity in Years (Avg. TPY)		1.0	19.4
Remaining Capacity in Years (2004-2005 TPY)		0.9	16.7

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design

Wi-Sampson County Disposal, Inc.

County:	Sampson

	Opened	Surveyed	Years Open
Date	9/6/2000	12/8/2004	4.3

	Total	Avg. Per Year	2004-2005
Tons Disposed	3,528,476.0	829,328.1	849,094.0

	Used	Permitted	Total
Volume Airspace (yd3)	4,290,134.0	7,800,000.0	50,000,000.0
Remaining Airspace (yd3)		3,509,866.0	45,709,866.0

Utilization Factor (tons/yd3):	0.82

	Permitted	Total
Remaining Capacity for Tons of Waste	2,886,734.5	37,594,668.4
Remaining Capacity in Years (Avg. TPY)	3.5	45.3
Remaining Capacity in Years (2004-2005 TPY)	3.4	44.3

Calculations

Average Tons Disposed Per Year = Total Tons Disposed / Years Open
Remaining Airspace = Total Volume Airspace – Volume of Airspace Used
Utilization Factor = Total Tons Disposed / Volume of Airspace Used
Remaining Capacity for Tons of Waste = Remaining Airspace x Utilization Factor
Remaining Capacity in Years =
Remaining Capacity for Tons of Waste / Average Tons Disposed Per Year
Remaining Capacity for Tons of Waste / 2004-2005 Tons Disposed
Permitted = Landfill Volume Constructed and Permitted to Operate
Total = Total Volume for the Landfill Site at Final Design